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COUNTY BOROUGH OF BOOTLE



# ANNUAL REPORT

OF THE

## MEDICAL OFFICER OF HEALTH

for the year ended 31st December, 1949

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JAMES F. SWAN,  
M.D., D.R.C.O.G., D.P.H.  
MEDICAL OFFICER OF HEALTH.

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BOOTLE:  
BOOTLE TIMES, 30, ORIEL ROAD.



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## FOREWORD.

*To the Mayor, Aldermen and Councillors  
of the County Borough of Bootle.*

MR. MAYOR, MADAM AND GENTLEMEN,

I have pleasure in presenting to you my second Annual Report, the seventy-seventh of the series, on the health of the people of the County Borough of Bootle.

During the year the implementation of the proposals of the Local Health Authority under the National Health Service Act, 1946, has proceeded satisfactorily, and it has been necessary to widen the Authority's powers with regard to the Ambulance Service and also to obtain extended powers with regard to the provision of convalescent treatment.

It will be noted from the statistics included in the report that the birth rate at 22·00 per thousand of the population continues to be well above the national rate for England and Wales, which is 16·7 per thousand of the population. The infant mortality rate of 54·5 per thousand births is still substantially above the national average of 32·0, and continues to give cause for dissatisfaction, although there are signs of improvement and the rate shows only a very slight increase on last year's rate of 54·1, which was the lowest ever recorded in Bootle.

It should be noted with regret that the number of persons vaccinated has shown a considerable decrease since vaccination ceased to be compulsory. Parents of every child born in the Borough are reminded of the benefits of vaccination when the child is a few months old, but the number taking advantage of the protection offered was only 735, as compared with 1,072 in 1948, and 1,344 in 1947, which was the last complete year of compulsory vaccination.

The delivery of a new Bedford ambulance has been of assistance in meeting the increased demand<sup>22</sup> on the Ambulance Service. When the second new vehicle, now on order,<sup>23</sup> is received it will enable us to dispense with another obsolete vehicle, and the complete replacement of the old ambulances is envisaged. The number of calls on the Ambulance Service during the year was 3,555. In 1948 the number of calls was 2,110, and the figures for 1949 show an increase of 68·5 per cent. on the previous year. The increase in the number of requests for the use of ambulances is causing considerable anxiety throughout the country, and

although in Bootle there are not very many instances of flagrant abuse of the Service, it is to be hoped that Hospital authorities and general practitioners will assist in every way by limiting the calls on the Service to those patients who are unable to use public transport. When the Liverpool Corporation finally ceases to undertake ambulance work on behalf of this Authority the calls on the Service will be further increased.

On pages 40 to 42 there is a brief account of an outbreak of paratyphoid fever on Merseyside, arising from a carrier employed in a Bootle bakery. The source of this infection was traced by medical and sanitary officers of this Department, and I should like to pay tribute to the thoroughness of the investigations which they carried out under my instructions.

It will be noted that the figure for deaths from tuberculosis of 1·04 per 1,000 of the population is substantially above that for England and Wales, *i.e.*, 0·45. Reference to the graph on page 46 shows that this is no isolated occurrence, but that during the past 25 years the figure for Bootle has always greatly exceeded that for the country as a whole. The smoothed trend lines on page 47 reveal that the decline in the Bootle rate is not any greater than that of the country as a whole. In other words, the rate of improvement in Bootle is slower than that in England and Wales.

The state of tuberculosis in the country has been aptly described in *The Times* as "a raging scandal," and one wonders how long the public are going to continue to accept with complacency the present disgraceful state of affairs. Speaking of tuberculosis 50 years ago, King Edward VII, then Prince of Wales, asked "If this disease is preventible, why is it not being prevented?" and there is no doubt that tuberculosis is to-day the greatest killer among the preventible diseases. Reference to the table on page 72 reveals that, while mortality from heart disease and cancer is greater than that from tuberculosis, the deaths from heart disease and cancer are mainly of those in the upper age groups, many of whom are in any case in the decline of life. Tuberculosis deaths, on the other hand, occur mainly in the younger middle ages, *i.e.*, among those who are in the prime of life and of the greatest economic importance to the country. One frequently reads in the daily press an outcry against road fatalities which during the past five years have averaged some 100 a week, while a small outbreak of smallpox resulting in a few deaths is enough to cause questions to be raised in Parliament. In the case of tuberculosis, however, the fact that almost 60 persons die *every day* does not seem to call for any comment, and this wanton disregard for

the plight of the tuberculous is surely to be regarded as a damnable indictment of our so-called civilisation.

The coming into operation of the National Health Service Act, far from improving matters, has brought about a deterioration in the position, particularly with regard to the institutional treatment of sufferers from pulmonary tuberculosis. The waiting list at the present time for sanatorium accommodation throughout the country is in the region of 11,000, and it may appear to you an anomalous state of affairs that there are available 1,000 empty beds in some of the most excellent Swiss sanatoria, but that these are not available for British patients on account of financial considerations. The maintenance charges in these sanatoria have been increased only slightly since 1939, and it is estimated that every bed could be filled immediately on a grant per patient of £12 to £15 per week. Prior to the coming into force of the National Health Service, Local Authorities sent patients to the Swiss sanatoria and met the cost of maintenance and treatment. Now, however, many of these sanatoria face great loss on account of empty beds and may be forced to close, notwithstanding the fact that their facilities for diagnosis and treatment are of an excellent standard, and that they are prepared to welcome British patients under conditions which would afford that atmosphere of rest and calm which is so essential to the treatment and rehabilitation of the tuberculous. If one assumes that there are 1,000 vacant sanatorium beds in Switzerland, and that a grant per patient of £12 to £15 per week would be required, it is seen that for an annual expenditure of less than three-quarters of a million pounds our waiting list could be reduced by 9 per cent., yet, according to a provincial newspaper,\* the Minister of Health, replying to a letter addressed to him by the Duchess of Portland, Chairman of Council, The National Association for the Prevention of Tuberculosis, stated that the present tuberculosis rate was the biggest plague for 200 years, but regretted that he had no money or nurses to spare. What is incomprehensible to me, and must be to you all, is that less than three-quarters of a million pounds cannot be spared for this purpose, when for the year 1950/51 the estimates of expenditure on the National Health Service were nearly £50,000,000 for dental services and over £28,000,000 for the supplementary ophthalmic service.

The private patient, subject to permission being received from the Treasury for the currency exchange involved, permission which is readily granted, is able to avail himself of the facilities offered at Swiss sanatoria,

\* *Nottingham Guardian*, 1st July, 1950.

and thus it appears that in the case of the tuberculous the deciding factor as to whether the patient shall receive sanatorium treatment, in Switzerland is the extent of his financial resources.

The matter of treatment, however, is one about which you can take little direct action. In the sphere of prevention and after-care you are, on the other hand, the responsible Authority, and as such your principal weapons are re-housing, education and B.C.G. vaccination, and, in collaboration with the Regional Hospital Board, mass miniature radiography.

A start has been made on B.C.G. vaccination and I shall in due course, in collaboration with the Chest Physician, present to you a scheme for the much fuller employment of this preventive measure, which it is hoped to extend at no far distant date to all babies born in the Borough.

Education of patients in the avoidance of the spread of infection is being pursued energetically by the medical staff and health visitors both in the home and in the tuberculosis dispensary.

Towards the end of 1949 arrangements were put in hand, in collaboration with the Liverpool Regional Hospital Board, for a Mass Radiography Survey to be carried out in the Borough. This was done early in 1950, and a report on the subject will be included in my Annual Report for that year.

The present bad housing conditions of the people are undoubtedly the most potent single factor in preventing the eradication of tuberculosis. I would emphasise the fact, which is already known to you, that almost all cases of tuberculosis have contracted the disease through close contact with a person who is already suffering from it. In other words, case begets case. I would, therefore, exhort you to pursue with the utmost energy the re-housing of families in which there is a case of tuberculosis in order to permit of adequate isolation of the case, and I might even go so far as to suggest that you allocate a substantial percentage of your new housing accommodation for the re-housing of tuberculosis patients and their families. In this connection it must not be overlooked that if re-housing entails increased rent, it may lead to a lower standard of dietary for the patient at the very time when good nutrition is most essential. I would also advocate most strongly that you seek powers to prevent families in which there is a case of tuberculosis from taking in sub-tenants, particularly sub-tenants with young children.

A great deal is known about the prevention of tuberculosis, but the efforts of both clinicians and hygienists to cope with the problem are being frustrated owing to the impossibility of segregating the patient either in a sanatorium or at home. The problem should be tackled with all the energy and ferocity of a major military operation, and those responsible for the direction of the National Health Service should drastically change the present cheezepearing attitude which has been adopted with regard to tuberculosis.

In conclusion I should like to tender to you, and especially to your Health Committee and its Chairman, and to the Town Clerk and other Chief Officials of the Corporation, my thanks for your encouragement and consideration, and to my staff my grateful acknowledgment of their support.

JAMES F. SWAN,  
*Medical Officer of Health.*

## **Section I.**

# **Constitution of Committees**

### **Health Committee**

COUNCILLOR DR. HARRIS, J.P., Chairman.

MR. COUNCILLOR WILLIAMS, Deputy Chairman.

HIS WORSHIP THE MAYOR (COUNCILLOR C. G. ANDERSON, J.P.).

MR ALDERMAN T. CONNOLLY.

MR. COUNCILLOR CRESSWELL.

MR. ALDERMAN HARRISON.

MR. COUNCILLOR CRIGHTON, J.P.

MR. ALDERMAN HUGHES.

MR. COUNCILLOR ELLIS.

MRS. ALDERMAN PRITCHARD.

MR. COUNCILLOR HEVEY.

COUNCILLOR DR. BROWN, J.P.

MR. COUNCILLOR J. S. KELLY.

MR. COUNCILLOR CAIN, J.P.

MR. COUNCILLOR ROGERSON.

### **Co-opted Members :—**

*Representatives of the Bootle Medieval and Panel Committee:*

DR. T. M. JONES and DR. J. S. WOOD.

*Representative of the Bootle Local Dental Practitioners Committee:*

MR. E. G. O'SHEA.

*Representative of the Bootle Pharmaceutical Committee:*

MR. L. D. PARRY.

*Representative of the Bootle General Hospital:*

MR. W. ROSS, J.P.

**General Health Committee**

COUNCILLOR DR. HARRIS, J.P., Chairman.

MR. COUNCILLOR WILLIAMS, Deputy Chairman.

HIS WORSHIP THE MAYOR (COUNCILLOR C. G. ANDERSON, J.P.).

MR ALDERMAN T. CONNOLLY.

MR. COUNCILLOR CRESSWELL.

MR. ALDERMAN HARRISON.

MR. COUNCILLOR CRIGHTON, J.P.

MR. ALDERMAN HUGHES.

MR. COUNCILLOR ELLIS.

MRS ALDERMAN PRITCHARD.

MR. COUNCILLOR HEVEY.

COUNCILLOR DR. BROWN, J.P.

MR. COUNCILLOR J. S. KELLY.

MR. COUNCILLOR CAIN, J.P.

MR. COUNCILLOR ROGERSON.

## Section II.

# Staff

### *Medical Officer of Health:*

JAMES F. SWAN, M.D., CH.B., D.R.C.O.G., D.P.H.

### *Deputy Medical Officer of Health:*

M. B. CLARKE, M.B., CH.B., D.P.H.

### *Assistant Medical Officers of Health:*

J. P. CORRIDAN, M.B., B.C.H., B.A.O.,  
(from 14th March). D.P.H.  
(One vacancy).

### *Tuberculosis Officer (Joint Appointment):*

R. HANNAH, M.C., M.B., CH.B., D.P.H.

### *Senior Dental Officer:*

H. B. DAWES, L.D.S.

### *Assistant Dental Officers:*

E. G. O'SHEA, B.D.S., (to 28th February).  
(One vacancy).

### *Chief Administrative Assistant and Health Education Officer:*

H. ALLEN LORD, B.A., A.C.C.S.

### *Superintendent Nursing Officer:*

MISS E. DOWD, S.R.N., S.C.M.,  
H.V.CERT. (from 1st March).

### *Health Visitor (Tuberculosis):*

MISS E. P. STARK.

### *Visiting Specialists:*

I. A. TUMARKIN, M.B., CH.B., F.R.C.S.,  
D.L.O., Aural Surgeon.

E. ALLAN, M.B., CH.B.,  
Ophthalmic Surgeon.

F. C. DWYER, M.B., CH.B., F.R.C.S.,  
M.C.H.O.R.T.H., Orthopaedic Surgeon.

### *Consultant Obstetrician:*

P. MALPAS, M.B., CH.M., F.R.C.S.,  
F.R.C.O.G.

### *Part-time Assistant Medical Officer:*

G. LENNON, M.B., CH.B., D.R.C.O.G.

### *Public Analyst:*

J. F. CLARK, M.Sc., D.I.C., F.R.I.C.

### *Chief Sanitary Inspector:*

W. H. WATTLEWORTH, F.R.SAN.I.,  
M.R.I.P.H.H., M.S.I.A.

### *District Sanitary Inspectors:*

J. M. CANGLEY.  
S. HESKETH (Meat & Foods Inspector).  
W. E. LEATHER.  
W. J. MASON.  
G. B. OWENS.

### *Municipal Midwives:*

MRS. E. H. HOY (Superintendent).  
MRS. E. C. BARTLETT.  
MRS. M. A. E. CHAMBERLAIN.  
MRS. M. W. DREWERY  
(from 14th November).  
MRS. W. J. GILMORE (to 4th July).  
MRS. S. R. LINDSAY (to 4th March).  
MISS W. J. LOUGHREAN  
(from 17th October).  
MRS. G. A. NEWNES (from 1st April).  
MRS. C. K. ROBERTS.  
MRS. R. SHAW.  
MISS A. E. THRASH.  
MISS C. WILLIAMS.  
MRS. W. WORTHINGTON,

**STAFF**--continued.*Health Visitors:*

MISS E. BASSETT.  
 MRS. V. A. BENSON.  
 MISS F. M. HUGHES.  
 MISS J. LYNCH.  
 MISS L. W. SKINNER.  
 MISS E. L. THOMAS.  
 MISS E. R. WILD (to 10th September).  
 MISS E. EDWARDS (*Student H.V.*).

*Assistants to Health Visitors:*

MISS M. F. EYNON.  
 MRS. H. SMAIL.

*Matron, Home Nursing Service:*

MISS E. HEAYNS (to 18th April).  
 MISS F. B. LAING (from 15th July).

*Mental Health Officers:*

MR. J. W. HARPER  
 (*Duly Authorised Officer*).  
 MISS M. M. WINKLE do.

*Domestic Help Supervisor:*

MRS. E. LANDER.

*Clerks:*

MR. H. A. BROWN, O.B.E. (*Chief Clerk*).  
 MRS. E. ALLINSON (from 7th November).  
 MISS K. BURGESS.  
 MR. D. C. CAHILL.  
 MRS. J. M. JAMES.  
 MISS D. M. LATIMER.

MISS M. M. THOMPSON  
 (to 16th September).

MISS M. TURNER (from 8th August).

MISS A. M. GIRVAN (*Clinic Assistant*).  
 MISS D. HARRISON do.

MISS G. WILLIAMS (*Dental Attendant*).  
 MISS D. BERNARD do.

*Ambulance Supervisor:*

MR. W. J. BATES.

## Section III.

### Vital Statistics

Civilian Population (Registrar-General's estimate at mid-year 1949)	...	...	...	...	...	...	...	70,000
Population at Census of 1931	...	...	...	...	...	...	...	76,770
Area in Acres (exclusive of river bed)	...	...	...	...	...	...	...	2,414
Inhabited houses (end of 1949) according to rate books	...	...	...	...	...	...	...	16,007
Uninhabited houses (end of 1949) according to rate books	...	...	...	...	...	...	...	80
Live Births—Males 788, Females 753	...	...	...	...	...	...	...	1,541
Birth Rate (per 1,000 population)	...	...	...	...	...	...	...	22·0
Still Births—Males 20, Females 13	...	...	...	...	...	...	...	33
Stillbirth Rate (per 1,000 total live and still births)	...	...	...	...	...	...	...	21·0
Total Deaths	...	...	...	...	...	...	...	783
Death Rate (per 1,000 population)	...	...	...	...	...	...	...	11·2
Maternal Mortality Rate (per 1,000 total births)	...	...	...	...	...	...	...	0·6
Number of deaths of Infants (under the age of one year)	...	...	...	...	...	...	...	84
Infant Mortality Rate (per 1,000 live births) (Legitimate 52·6, Illegitimate 89·7)	...	...	...	...	...	...	...	54·5
Deaths from Whooping Cough (all ages)	...	...	...	...	...	...	...	5
Deaths from Diarrhoea (under 2 years of age)	...	...	...	...	...	...	...	18
Death Rate from Respiratory Tuberculosis (per 1,000 population)	...	...	...	...	...	...	...	0·94
Death Rate from all forms of Tuberculosis (per 1,000 population)	...	...	...	...	...	...	...	1·04

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The Rateable Value of the Borough as at April 1949 was £482,886  
The estimated product of a Penny Rate for 1949-50 ... £1,900  
In 1949-50 the General Rate was 19/11 in the £ (excluding Water rate  
and charges).  
The cost of the Health Services during 1949-50 was estimated at  
£37,957, equivalent to a rate of 1s. 8d. in the £.

## Section IV.

### Comparison of Statistics with those of Previous Years

#### Population

The Census returns from the year 1881 show the population of the Borough as follows:—

1881	...	...	...	...	...	...	27,374
1891	..	...	...	...	...	...	49,217
1901	...	...	...	...	...	...	58,556
1911	...	...	...	...	...	...	69,876
1921	...	...	...	...	...	...	76,487
1931	...	...	...	...	...	...	76,770

The Registrar-General's estimate of the civilian population at mid-year was 70,000. This estimate shows that the population of the Borough last year was some 470 more than in the summer of 1948, and the latest quarterly estimate of the Registrar-General gives the population as 70,140 on 31st December, 1949, this figure including members of the Merchant Navy at home and abroad.

#### Marriages.

The Superintendent Registrar states that the number of marriages during the year was 661.

From a total of 653 in 1938, the number of marriages rose to 891 in 1940, then dropped to 469 in 1941. This was followed by a steady rise to 662 in 1947. In 1948 the number fell to 624 and this year's figure shows a slight increase.

#### Births.

During the year 1,541 live births were registered, representing a birth rate of 22·0 per 1,000 of the population, that for England and Wales being 16·7. There were 788 male and 753 female births. It will be noted that the birth rate is as usual well above the national rate.

## BIRTH RATES, 1873-1949.

Period.	BOOTLE.		England & Wales Rate per 1,000.
	Births.	Rate per 1,000.	
1873—1880 ...	6,846	38·6	35·4
1881—1890 ...	15,508	36·8	32·4
1891—1900 ...	17,716	33·2	29·9
1901—1910 ...	20,468	32·3	27·2
1911—1920 ...	20,748	27·6	21·8
1921—1930 ...	18,884	22·8	18·4
1931—1935 ...	8,367	21·8	15·0
1936—1940 ...	7,959	21·6	14·9
1941 ...	1,199	22·8	14·2
1942 ...	1,104	23·9	15·8
1943 ...	1,327	26·5	16·5
1944 ...	1,574	28·2	17·6
1945 ...	1,429	24·4	16·1
1946 ...	1,797	27·9	19·1
1947 ...	2,022	30·3	20·5
1948 ...	1,700	24·5	17·9
1949 ...	1,541	22·0	16·7

The illegitimate births (including stillbirths) numbered 83 and were 5·4 per cent. of the total births. In 1948 the number was 93.

### Deaths.

The total number of deaths of Bootle residents during 1949 was 783, including 45 who died in institutions within the Borough, and 351 who died in institutions outside the Borough, of whom 12 died in mental hospitals. This gives a total of 396 deaths in institutions, i.e., 50·6 per cent. of the total deaths, as compared with 60·8 per cent. in 1948. The deaths during the year are equivalent to a death rate of 11·2 per 1,000 as compared with 10·6 per 1,000 in 1948. This is the second lowest death rate ever recorded in the Borough and compares favourably with the rate of 12·5 for the 126 great towns of England and Wales.

## DEATH RATES, 1873-1949.

Period.	BOOTLE.		England & Wales.	
	Total	Deaths.	Rate per 1,000.	
1873—1880 ...	3,823		21·7	21·2
1881—1890 ..	8,260		19·9	19·1
1891—1900 ...	10,942		20·6	18·2
1901—1910 ...	11,400		17·8	15·4
1911—1920 ..	12,470		17·1	14·3
1921—1930 ...	10,336		13·5	12·1
1931—1935 ...	5,212		13·5	12·0
1936—1940 ...	5,019		13·8	12·5
1941 ...	1,227		23·3	12·9
1942 ...	629		13·6	11·6
1943 ...	745		14·9	12·1
1944 ...	732		13·1	11·6
1945 ...	754		12·9	11·4
1946 ...	793		12·3	11·5
1947 ...	866		13·0	12·0
1948 ...	784		10·6	10·8
1949 ..	783		11·2	11·7

## COMPARATIVE MORTALITY AND BIRTH RATES.

	Death Rate all causes per 1,000 of population.	Live Birth Rate per 1,000 of population.	Infant Mortality per 1,000 live births.
BOOTLE ... ...	11·2	22·0	54·5
126 County Boroughs and Great Towns	12·5	18·7	37·0
148 Smaller Towns..	11·6	18·0	30·0
(Resident population 25,000—50,000 at 1931 Census)			
England and Wales	11·7	16·7	32·0

BIRTH-RATES,  
BOOTLE AND ENGLAND AND WALES,  
1890-1949.

1890

1900

1910

1920

1930

1940

BIRTH-RATE (PER 1,000 POPULATION).

1890

1900

1910

1920

1930

1940

—  
—

BOOTLE  
ENGLAND AND WALES

1950

1890

1900

1910

1920

1930

1940

1890

1900

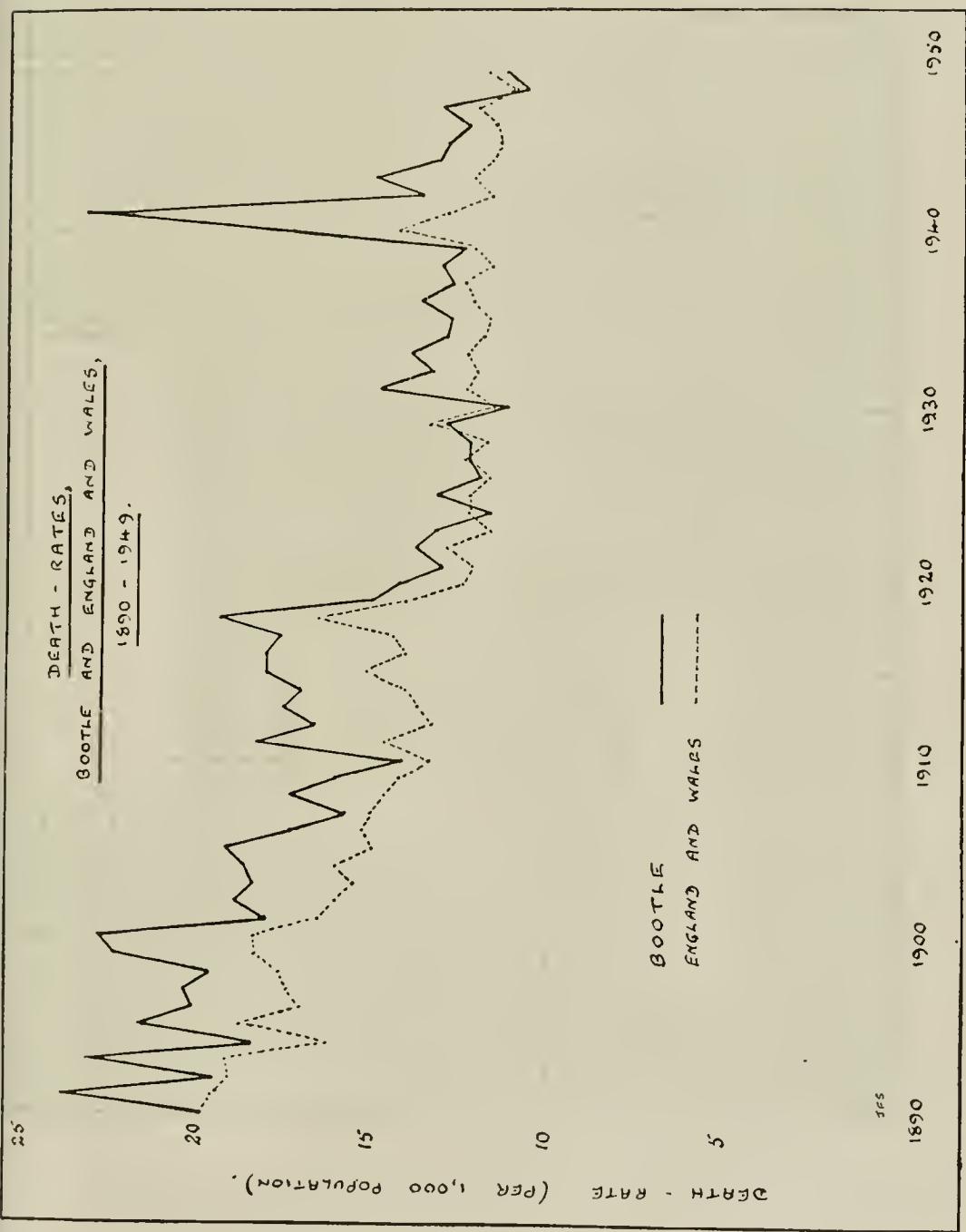
1910

1920

1930

1940

1950



### **Causes of Death.**

The causes of death, classified according to age, are shown in the table on page 72.

*Communicable Diseases.*—Epidemic diseases, excluding tuberculosis, accounted for 81 deaths, including 55 from pneumonia, 1 from cerebro-spinal meningitis, 1 from poliomyelitis, 5 from whooping cough, and 1 from measles. Deaths from diarrhoea and enteritis numbered 18, as compared with 14 during 1948; 16 were of infants under one year.

*Respiratory Diseases.*—Pneumonia was responsible for 55 deaths, bronchitis for 54, and other respiratory diseases for 6, making the total deaths from respiratory diseases (excluding influenza and tuberculosis) 115. This amounts to 14·6 per cent. of the total deaths at all ages, as compared with 13·8 per cent. in 1948. Influenza was recorded as a cause of death in 7 cases.

*Cancer.*—Cancer was registered as the cause of death in 112 cases, as compared with 116 in the preceding year. This represents a cancer death-rate of 1·6 per 1,000 of the population as compared with 1·7 during the year 1948.

*Violent Causes.*—There were 26 deaths from violent causes (including 8 from road traffic accidents) and 9 from suicide.

*Neo-Natal Mortality.*—Thirty-six children died before reaching the age of one month, of whom twenty-four died during the first week of life. This gives a neo-natal mortality rate of 23·4 per 1,000 births. Prematurity was responsible for 18 of the neo-natal deaths.

*Infant Mortality.*—There were 84 deaths of infants under the age of one year, compared with 92 in 1948. The infant mortality rate was 54·5 per 1,000 births, compared with 54·1 in 1948, and 78·0 in the decennium 1938 to 1947.

The rate of infant mortality in males was 59·6 and in females 49·1. Throughout England and Wales the rate of infant mortality was 32 per 1,000 births, and in the 126 great towns it was 37.

The most important of the causes of infant death were : Bronchitis and pneumonia 23, congenital malformations, birth injuries and diseases peculiar to infancy 19, diarrhoea and enteritis 16, premature birth 16.

The rate of infant mortality in legitimate infants was 52·6 and in illegitimate infants it was 89·7.

The respiratory diseases, bronchitis and pneumonia, were responsible for the largest group of infant deaths.

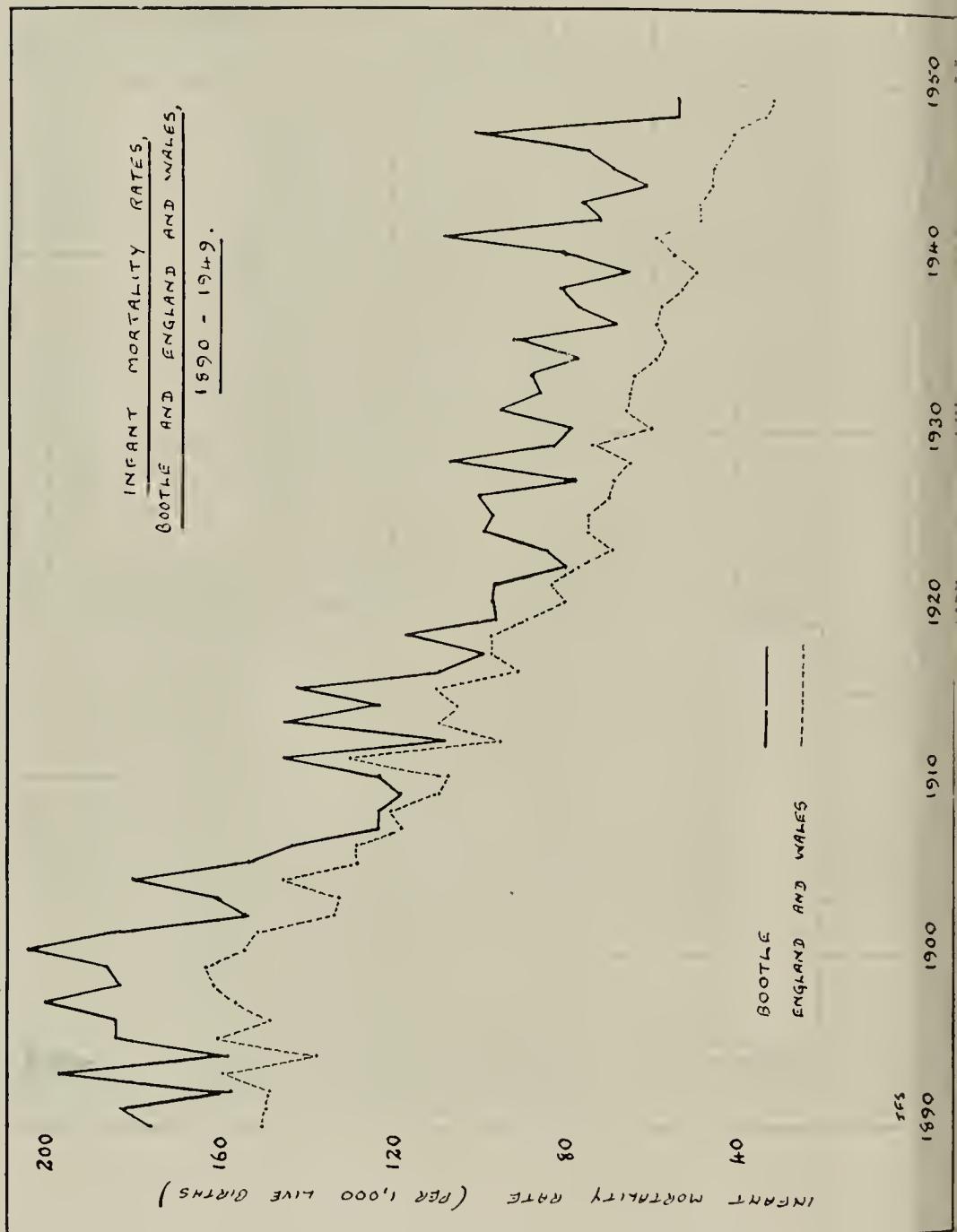
### INFANT MORTALITY RATE—BOOTLE COMPARED WITH ENGLAND AND WALES.

Years.		BOOTLE.	England & Wales.
1901-05	...	166	138
1906-10	...	130	117
1911-15	...	133	110
1916-20	...	103	91
1921-25	...	91	76
1926-30	...	89	68
1931-35	...	87	62
1936-40	...	74	55
1941	...	108	59
1942	...	72	49
1943	...	76	49
1944	...	61	46
1945	...	69	46
1946	...	75	43
1947	...	91·5	41
1948	...	54·1	34
1949	...	54·5	32

A tabular statement of the causes of death of children under the age of one year is given on page 73.

*Deaths of Children aged 1-5 years.*—There were 23 deaths of children aged 1 to 5 years, as compared with 19 in 1948. The principal causes were tuberculosis 3, bronchitis and pneumonia 7, accident and other violent causes, 7.

*Inquests.*—Inquests were held on 38 deaths.



## Section V.

# Services Provided Under Part III of the National Health Service Act, 1946.

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### Care of Mothers and Young Children.

#### *Notification of Births.*

The number of births notified under Section 203 of the Public Health Act, 1936, was 1,580 live births and 30 still births.

#### *Care of Premature Infants.*

Notification is made in cases where the birth weight is  $5\frac{1}{2}$  lb. or less. In such cases every effort is made to secure a separate bedroom for mother and infant, and to provide a draught-proof cot with detachable lining, suitable bedding, hot water bottles and special feeding bottles; if any of the latter requirements are not available they are provided on loan from the Health Department.

On notification of a premature birth occurring at home, a Medical Officer of the Department communicates with the doctor in attendance, and if necessary visits the home to discuss the position with the doctor and the midwife. Before the midwife relinquishes responsibility arrangements are made for the Health Visitor for the district to take over early supervision.

The following notifications of premature births to mothers ordinarily resident in the Borough were received :—

#### BIRTHS.

##### *In Borough—*

(a) Home	...	...	...	...	...	...	...	19
(b) Maternity Homes	...	...	...	...	...	...	...	22

##### *Outside Borough—*

(a) Walton Hospital	...	...	...	...	...	...	58
(b) Liverpool Maternity Hospital	...	...	...	...	...	...	12
(c) Other Hospitals and Nursing Homes	...	...	...	...	...	...	15

*Public Health (Ophthalmia Neonatorum) Regulations, 1926 to 1937.*

Five cases of ophthalmia neonatorum were notified during the year; the vision was unimpaired in all cases.

*Ante-Natal Clinics.*

Five Ante-Natal Clinics were held each week. During the year 1,039 new cases attended, corresponding to 66·0 per cent. of the total registered births; in addition 282 cases carried over from the preceding year continued under supervision, and a total of 4,467 attendances was made, with an average of 21·7 patients per session. It should be noted that Bootle patients intending to enter Walton Hospital for confinement usually attend the Ante-Natal Clinic held at that Institution.

*Infant Welfare Clinics.*

Five infant clinic sessions were conducted weekly throughout the year.

## INFANT WELFARE CLINICS.

Clinic,	New Cases.			Attendances.				Average attendance at clinic,
	Under one year.	One to five years.	Total.	Under one year.	One to five years.	Total.	No. of Sessions	
<i>Health Centre—</i>								
Monday afternoon ..	212	26	238	1566	326	1892	48	39·6
Wednesday afternoon	254	61	315	2212	420	2632	52	50·6
Thursday afternoon .	145	23	168	1642	259	1901	52	36·5
<i>School Medical Offices-</i>								
Tuesday afternoon ..	207	28	230	1917	278	2195	51	43·0
Thursday afternoon..	161	28	189	1545	237	1782	52	34·2
Totals	979	161	1140	8882	1520	10402	255	48·8

*Supply of Cod Liver Oil and Fruit Juices.*

The scheme of the Ministry of Food for distribution of fruit juices and cod liver oil to mothers and young children was continued during the year, and this valuable supplement to the vitamin content of their diet is available to all expectant mothers and to children up to the age of five years.

Issues of vitamin products to infants and expectant mothers through the Council's clinics and Nursery Classes were as follows:—

	<i>Free.</i>	<i>Sold.</i>
Cod Liver Oil (bottles) ... ... ...	15,499	...
Cod Liver Oil Tablets (packets) ... ... ...	3,889	...
Orange Juice (bottles) ... ... ...	2,429	... 36,625

*Residential Nursery, Formby.*

This Residential Nursery, which was opened on 5th December, 1945, for the reception of twenty-two infants, has made a valuable contribution to the maternity and child welfare service in that it accommodated the infants of mothers who were in hospital or maternity home, or whose economic status made it necessary for the child to be temporarily cared for away from home. The administration of the Nursery is now the responsibility of the Children's Committee.

During the year 93 children were admitted, 97 were discharged, and 7 were in residence on 31st December, 1949. The admissions included 49 children below the age of two years, and 44 children between the ages of two and five years. Of those discharged during the year 55 had a stay not exceeding five weeks, 30 remained for 5—10 weeks, 3 for 10—15 weeks, 5 for 15—30 weeks, and 4 remained for longer periods.

Of the admissions during the year 57 were in respect of the mother's confinement, 33 on account of the mother's illness, and 3 because of other social difficulties.

The Nursery is a training centre for the Certificate of the National Nursery Examination Board, and seven nursery students are engaged on the two years' course of training; three students obtained the certificate during the year.

*Litherland Day Nursery.*

One Bootle child was accommodated at the Lancashire County Council's Day Nursery at Litherland as a special case, for which the Health Committee accepted financial responsibility.

*Convalescent Home Provision.*

During the year 15 children under five years of age and 141 children over that age were sent to convalescent homes.

*Care of Illegitimate Children.*

Special arrangements for the care of illegitimate children have been operating for some years. One of the Health Visitors is responsible for taking such action as is possible in the interests of the unmarried mother and her child.

Fifty-five cases were dealt with; these came to the notice of the Department from the following sources:—

*Before Confinement—*

Moral Welfare Agencies	...	...	...	5
Walton Hospital	...	...	...	15
Ante-natal clinics	...	...	...	6
Municipal Midwives	...	...	...	5
Health Visitors	...	...	...	5
Mothers' own application	...	...	...	6
Other Agencies	...	...	...	3
			—	45
<i>Birth Notifications</i>	...	...	...	10
			—	55
			—	

The work done in this connection comprised 1,355 visits to homes, 125 office interviews and 5 visits to Institutions.

Four of the unmarried mothers were admitted to Homes of the Moral Welfare Agencies at the expense of the Corporation.

*The final disposal of the infants was as follows:—*

Remained with mother	...	...	...	42
Legal adoption	...	...	...	2
Admitted to Institutions	...	...	...	4
Removed from district, or death	...	...	...	7

*The Liverpool Child Welfare Association.*

Representatives of this Association have attended clinics at the School Medical Offices weekly to undertake on behalf of the Council arrangements for the supply and fitting of orthopaedic appliances prescribed by the medical staff, and the provision of clothing, fireguards and convalescent home treatment. During the year the Association dealt with 403 new cases (126 children under 5 years and 277 school children); 141 children were sent to Convalescent Homes, with an average stay for 15 children under five of 36·4 days and for 126 children over five of 29·23 days.

The staff paid 1,877 home visits and the clinic interviews totalled 1,365.

**Municipal Midwifery Service**

*Notification of Intention to Practise.*

Fifty-three midwives gave notice during the year of their intention to practise midwifery in the Borough; 13 of these were municipal midwives, 29 were engaged in Liverpool Hospitals, 3 in private Nursing Homes, 1 in private domiciliary practice and 7 in the Bootle Maternity Home.

*Cases attended by Municipal Midwives.*

Cases attended (a) as midwife	...	...	...	...	434
(b) as maternity nurse	...	...	...	...	113
Home Visits (ante-natal)	.....	...	...	...	2,741
,,      ,,  (puerperium)	...	...	...	...	9,282

Of the total of 1,574 births to Bootle mothers the municipal midwives attended 547 births (35·0 per cent.), and the remaining births took place in the following institutions:—

Walton Hospital	...	...	...	...	...	518
Liverpool Maternity Hospital	...	...	...	...	...	107
Bootle Maternity Home	...	...	...	...	...	240
Nursing Homes	...	...	...	...	...	38
Other hospitals, etc.	...	...	...	...	...	124

(These figures include 33 stillbirths.)

Patients engage the services of the midwife nearest to their own homes, and the midwife is responsible for their ante-natal care from the date of booking.

### *Gas and Air Analgesia.*

Nine municipal midwives are qualified to administer gas-air analgesia; three sets of apparatus are in use.

During the year gas-air analgesia was given in 110 cases.

### *Medical Aid.*

The services of a medical practitioner were requested in 145 maternity cases during the year. In 80 cases the medical practitioners had arranged to provide the patient with maternity medical services under the National Health Service. In the remaining 65 cases the Local Authority paid the fees of the practitioners.

### *Transport.*

The Superintendent Midwife receives a car allowance of £25 per annum, and one of the domiciliary midwives a car allowance of £15 per annum. Those municipal midwives who possess a bicycle receive an allowance of 7/6 per month. During the night, if public service vehicles are not available, transport is provided from the Ambulance Depot, and if a vehicle is not available from the Depot the midwives hire a taxi.

## **Health Visiting.**

### *Home Visitation.*

The staff paid 18,169 home visits, including 6,886 visits to infants under one year, and 10,002 visits to children aged from one to five years.

### *Home Visits to Expectant Mothers.*

The Health Visitors paid 613 home visits to expectant mothers to advise them on general and personal hygiene, with a view to promoting normal childbirth.

### *Staff.*

The establishment provides for one Superintendent Nursing Officer and ten full-time health visitors, of whom one is mainly responsible for the care of unmarried mothers and their children. At the end of the year eight health visitors were employed, and it has not been possible to maintain a full staff.

Because of the difficulty of obtaining health visitors, the Committee in November 1948 approved of a scheme for the engagement of student health visitors who would attend a whole-time course of training at the Liverpool University School of Hygiene and would receive during the first year three-quarters of the minimum salary laid down for health visitors in the Rushcliffe Report. After the period of training they would return to the service of the Authority for the remainder of the twelve months, and if successful in obtaining the Health Visitor's Certificate would, if required, give a further twelve months' service to the Authority. One student was engaged during the year.

### **Home Nursing.**

#### *Premises.*

At the beginning of the year the District Nurses were accommodated in the Nurses' Home belonging to the Bootle District Nursing Association. In March the solicitors acting for the Association intimated that the Charity Commissioners had directed that the house was to be sold, and the Health Committee appointed a Sub-Committee to inspect the premises and any other available premises in the Borough suitable for use as the Headquarters of the Home Nursing Service.

The Sub-Committee eventually recommended the Health Committee to acquire the house No. 11, Breeze Hill, which was considered to be very suitable in view of the envisaged extension of the home Nursing Service. This recommendation was adopted and the premises were decorated and additional furniture and equipment obtained. The staff removed to the new Headquarters on 30th September. The house is a large semi-detached, three-storeyed house providing ample accommodation for the staff and for the other requirements of a Home Nursing Headquarters.

#### *Staff.*

Miss E. Heayns, the Matron, resigned with effect from 18th April, and she was succeeded by Miss F. B. Laing on 15th July.

At the end of the year the staff consisted of Matron, two other State Registered Nurses, two Enrolled Assistant Nurses, and one part-time Nurse.

*Visits.*

During the year 20,493 visits were paid to 939 patients.

*Transport.*

The Home Nurses are granted a cycle allowance of 7/6 per month.

**Vaccination and Immunisation.***Vaccination.*

During the year vaccination continued to be carried out by general practitioners and by the Local Health Authority's medical staff. The numbers dealt with were as follows:—

By general practitioners	...	...	...	307
By Local Health Authority's staff	...	...	...	428

*Immunisation.*

During 1932 a scheme was inaugurated whereby a specific clinic appointment for immunisation against diphtheria is made to parents when their children reach the age of nine months. During the year a total of 1,180 children completed the series of inoculations. This compares with 1,399 children inoculated in 1948. A reinforcing inoculation was given to 637 previously inoculated children on their reaching school age. The present position is that 71·4 per cent. of children under five years of age and 69·1 per cent. of children between the ages of five and fifteen years have been protected against this disease.

Parents are advised that immunisation can be carried out either by their own doctor or by the Local Health Authority's medical staff.

The following table shows the number of children completing the series of inoculations since the inauguration of the scheme.

DIPHTHERIA IMMUNISATION.

Age at date of inoculation.	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	Total
Under one year	—	—	—	1	—	1	3	3	2	1	4	4	48	53	91	551	679	421
1-2 years	6	5	36	34	31	32	46	44	43	45	46	46	196	314	459	720	619	417
2-3	..	..	12	11	39	75	40	48	46	46	61	61	239	250	157	154	81	48
3-4	..	..	15	22	62	70	47	46	33	49	29	108	208	156	74	91	60	332
4-5	..	..	18	28	43	55	46	35	33	37	22	76	209	193	100	52	61	37
5-6	..	..	142	242	311	279	278	191	334	66	15	213	405	338	221	211	352	187
6-7	..	..	237	224	194	267	232	261	190	199	4	440	290	135	71	57	79	38
7-8	..	..	45	242	35	40	21	40	23	10	6	115	135	56	16	11	10	5
8-9	..	..	4	62	12	10	14	12	9	7	3	44	101	52	9	6	5	36
9-10	..	..	2	20	9	6	4	3	1	6	—	28	52	41	5	5	1	4790
10-11	..	..	1	1	3	10	7	4	4	1	1	45	90	52	4	2	5	—
11-12	..	..	—	2	5	10	4	1	4	1	—	—	38	80	38	—	3	2
12-13	..	..	—	1	1	4	7	2	—	1	—	—	36	96	22	4	—	1
13-14	..	..	—	—	3	2	4	—	1	—	—	—	30	58	15	—	—	2
14-15	..	..	—	—	—	1	—	—	—	—	—	—	—	28	2	1	—	1
15 years & over	—	—	—	—	—	—	—	—	—	—	—	—	—	9	13	—	2	—
Age not known	100	120	19	2	76	29	20	5	—	—	—	—	—	—	—	—	—	396
<b>TOTALS</b>	582	980	773	865	812	705	747	478	172	1342	2260	1713	1172	1369	1420	1322	1399	1180
																		19,291

### **Ambulance Service.**

#### *Administration.*

The Ambulance Service has been under the control of the Health Committee since 15th December, 1944. In January the Health Committee considered the question of the transfer of the administration of the Ambulance Service to the Fire Brigade, and a Special Joint Sub-Committee was set up to consider the matter. In March the Sub-Committee recommended that the Ambulance Service be merged into the Fire Brigade but this resolution was subsequently rescinded, and in June it was decided that the Service should remain under the control of the Medical Officer of Health.

#### *Agency Arrangements.*

At the beginning of the year the Town Clerk of Liverpool informed the Council that owing to the increasing pressure on the City's Ambulance Service it was necessary to consider what steps could be taken to relieve the Service of extraneous duties and enquiring how soon the Council would be in a position to undertake the transport of certain Bootle cases which was carried out by the Liverpool Ambulance Service under agency arrangements.

Representatives of the Liverpool and Bootle Health Committees met to consider the question, when it was agreed that for a period of six months, pending arrangements being made by the Bootle Corporation to operate the whole of the service required in the Borough, cases of general sickness should continue to be removed by the Liverpool City Ambulance Service. The conveyance of cases of infectious disease except at night and at week-ends and also conveyance of cases of tuberculosis was undertaken by the Bootle Ambulance Service. The arrangements made with the Merseyside Hospitals Council for the removal of certain cases and the arrangements entered into with the Lancashire County Council for mutual aid in cases of emergency were continued.

#### *Vehicles.*

The increasing demand on the Service made it necessary to obtain new vehicles and in June 1949 an order was placed for a new Bedford 30 cmts. ambulance chassis with Lomas body. This was followed by a further order for a similar vehicle in September.



AMBULANCE RECENTLY SUPPLIED TO THE COUNCIL  
(Bedford chassis, Lomas body).



*Staff.*

In March an additional seven ambulance driver/attendants were appointed bringing the total up to 14, and a telephonist was also appointed.

*Ambulance Depot.*

The question of providing more suitable accommodation for the staff and the vehicles has been under consideration and it is hoped that it may be possible to make some improvement in this direction.

During the year the number of cases dealt with was as follows:—

		Day. 7 a.m.—11 p.m.		Night. 11 p.m.—7 a.m.
Hospital Transfers	...	... 1,861	...	92
Accidents (a) Docks	...	... 478	...	51
(b) Elsewhere	...	... 356	...	31
Sickness and Maternity	...	... 437	...	131
Removals on behalf of Merseyside				
Hospitals Council	...	... 6	...	—
Removals on behalf of Lancs.				
County Council	...	... 17	...	4
Others	...	... 87	...	4
		<hr/>		<hr/>
		3,242	...	313
		<hr/>		<hr/>

In 1948 the comparative figures were 2,024 day calls and 286 night calls.

In addition, 143 cases of infectious disease were removed to hospital by the ambulance allocated to this work.

**Prevention of Illness (Care and After Care)***Tuberculosis.*

The Health Committee has appointed a Care Sub-Committee to deal with the special problems of tuberculous patients in the home. In addition to the visits paid by the Tuberculosis Visitor, visits to the homes of tuberculous patients are paid by Health Visitors and assistance is given in providing nursing requisites, sputum flasks, etc. Where the housing accommodation is overcrowded or unsuitable, representations are made by the Medical Officer of Health to the Housing Committee so that priority can be given to such cases.

### *Mental Illness or Defectiveness.*

Two whole-time mental health workers are engaged, and they made 86 pre-care and 344 after-care visits during the year.

There is no Occupation Centre in Bootle for mental defectives, but nine defectives attend the Centre at Waterloo by arrangement with the Lancashire County Council, and two attend a Liverpool Centre by arrangement with the Liverpool City Council. Such a centre in the Borough would be a great boon to parents of defective children.

### *Provision of Sick-Room Equipment.*

Articles of sick-room equipment are stored at the headquarters of the Home Nursing Service and are issued on loan. A deposit is requested and is refunded when the articles are returned in good condition.

### *Health Education.*

In November three films dealing with rodent control were shown to senior pupils in the secondary grammar and secondary modern schools. The films were entitled "Town Rats," "Farm Rats" and "The Pied Piper," and were exhibited in the Town Hall and in two of the schools. The films were seen by approximately 850 pupils.

### *Convalescence.*

In accordance with Section 28 of the National Health Service Act 1946 convalescence not involving medical treatment was arranged for patients recommended by general practitioners. A period of convalescence was approved by the Health Committee for 30 patients but 6 applications were eventually withdrawn.

### **Domestic Help Service.**

During the year the equivalent of 12 full-time workers has been engaged together with the supervisor and 189 applications have been dealt with, representing 25,234 working hours.

Heavy demands have been made on the Service particularly by chronic patients and old persons. The householders utilising the service have been required to pay towards the cost in accordance with the scale recommended by the Association of Municipal Corporations, but they have the right to appeal against the assessment in cases where this scale would impose undue hardship.

## Section VI.

### Mental Health Service

In accordance with the provisions of Section 49 of the National Health Service Act, 1946, the Bootle County Borough Council became responsible as from the 5th July, 1948, for carrying out the functions of a Local Health Authority under the Lunacy Mental Treatment and Mental Deficiency Acts, as amended by the National Health Service Act, 1946, and the Regulations made under those Statutes.

The duties formerly carried out by Relieving Officers with regard to the initial disposal and care of patients of unsound mind under the Lunacy and Mental Treatment Acts are now assigned to Duly Authorised Officers of the Local Health Authority. The responsibility for providing institutional accommodation rests with the Liverpool Regional Hospital Board.

Domiciliary mental health services of the Local Health Authority are administered by the Mental Health Sub-Committee and comprise

- (a) the ascertaining of cases of mental illness and mental defectiveness;
- (b) the voluntary and statutory supervision and guardianship of mental defectives in the community;
- (c) the obtaining of Detention Orders and the making of arrangements for the admission of voluntary patients, mental defectives and persons of unsound mind into mental hospitals;
- (d) the welfare in the community of persons suffering from mental illness or defectiveness, and particularly the provision of after-care for persons discharged from mental hospitals and certified institutions.

Details of the service are as follows:—

### **1. Administration.**

The Mental Health Sub-Committee consists of 5 members, 4 being elected members of the Health Committee, and 1 a co-opted member of the Health Committee.

Meetings of the Committee were held monthly.

(a) *Staff.*—The medical direction of the service is the responsibility of the Medical Officer of Health, who will be advised in the organisation and control of the service by a part-time specialist medical officer, with experience in both mental illness and mental defectiveness. This officer will be appointed by the Liverpool City Council, with whom arrangements have been made for the joint user of his services.

Two mental health workers have been appointed, one male and one female, and these have been designated "Duly Authorised Officers."

(b) *Co-ordination with Regional Hospital Board and Hospital Management Committee.*—It is proposed that by arrangement with the Liverpool Regional Hospital Board, the services of one or more specialist medical officers will be available in a consultative capacity in connection with the ascertainment of mental defectives.

(c) No duties have been delegated to voluntary associations.

### **2. Account of Work undertaken in the Community.**

(a) *National Health Service Act, 1946, Sec. 28: Prevention (Care and After Care).*—During the year 86 pre-care and 344 after-care visits were made. Three female senile dementia cases were removed to Newsham General Hospital, and two male senile dementia cases were removed to Kirkdale Homes. Arrangements were made for 9 patients to attend Psychiatric Clinics.

(b) *Lunacy and Mental Treatment Acts, 1890-1930.*—Under the Lunacy Act, 1890, as amended by the National Health Service Act, 1946, 56 cases were removed for observation to Sefton General Hospital, and two similar cases were removed to Whiston Hospital. Seventy-one cases were investigated; two were certified and removed to mental hospitals; seven voluntary patients were conveyed to Rainhill Hospital.

:

(c) *Mental Deficiency Acts, 1913-38.*

- (i) *Ascertainment.*—Under these Acts 14 cases were ascertained and found subject to be dealt with. There are 8 cases awaiting vacancies in institutions.
- (ii) *Guardianship and Supervision.*—Twenty-seven visits were made to guardianship cases and 605 to voluntary and statutory supervision cases. Two Justice's Orders were obtained on petition placing 2 defectives in Institutions and one varying order obtained transferring a case to another guardian; one defective child was admitted to Whitecross Homes, Warrington, on a "Place of Safety" Order. One case under supervision was removed to an institution under section 8 of the Mental Deficiency Act. Under the provisions of Circular 177/48 four cases were discharged from guardianship and placed under Statutory Supervision.
- (iii) *Training.*—By arrangement with the Lancashire County Council nine cases under supervision attended the Occupation Centre at Olive Hall, Waterloo, and two attended a Liverpool Centre.

## Section VII.

# Dental Treatment of Expectant and Nursing Mothers and Young Children

The following report has been supplied by the Senior Dental Officer:—

### (a) PATIENTS PROVIDED WITH DENTAL CARE.

	Examined	Needing Treatment	Treated	Made Dentally Fit
Expectant and Nursing Mothers	328	310	136	98
Children under Five	142	136	130	130

### (b) FORMS OF DENTAL TREATMENT PROVIDED.

	Extrac-tions	Anaesthetics		Fill-ings	Seal-ings or Scaling & Gum Treat-ment	Silver Nitrate Treatment	Dress-ings	Radio-graphs	Dentures Provided	
		Local	General						Complete	Partia-
Expectant and Nursing Mothers	518	—	194	—	—	—	50	—	98	—
Children under Five	159	—	113	—	—	—	12	—	—	—

## Section VIII.

### Communicable Diseases

The number of cases of infectious disease notified during the year is summarised as follows:—

			Cases notified.	Cases admitted to hospital.	Deaths.
Enteric Fever	...	...	8 (7)	8	—
Paratyphoid Fever	...	...	18 (3)	17	—
Scarlet Fever	...	...	190 (7)	103	—
Diphtheria	...	...	49 (41)	49	—
Ophthalmia Neonatorum	...	...	5	—	—
Erysipelas	...	...	7	3	—
Measles	...	...	424 (1)	17	1
Whooping Cough	...	...	517 (3)	32	5
Infant Diarrhoea (under two years)					
voluntarily notifiable	...	...	29 (1)	18	18
Acute Primary and Influenzal					
Pneumonia	...	...	68	21	55
Cerebro-Spinal Meningitis	...	...	19 (6)	18	1
Puerperal Pyrexia	...	...	2	2	—
Dysentery	...	...	9	7	—
Food Poisoning	...	...	19	6	—
Acute Poliomyelitis and Acute					
Polioencephalitis	...	...	12 (1)	12	1
*Tuberculosis—					
(a) Pulmonary	...	...	164	—	66
(b) Non-Pulmonary	...	...	17	—	7

\* Primary notifications.

(The totals in brackets give number of cases where diagnosis was not confirmed.)

#### Typhoid Fever.

Eight cases of typhoid fever were notified, but in seven of the cases the hospital authority was unable to confirm the diagnosis.

### **Epidemic of Paratyphoid Fever.**

During the period June to September there occurred on Merseyside an epidemic of mild paratyphoid fever due to *S. paratyphi B* Vi-phage type 2. The distribution of these cases is shown in Table I.

Although the majority of the cases occurred in Liverpool, field investigation pointed to a bakery in Bootle as the source of the dissemination of infection, through the sale of the firm's products in their branch shops in Liverpool and district.

*Investigation at the Bakery.*—The bakery was visited by officers of this Department, and it was explained to the management that there was a suspicion that products distributed from the bakery were responsible for the spread of infection, and the management offered their whole-hearted co-operation in the investigation.

The bakery employed 455 people and produced bread and various kinds of eakes. Of these 455 persons 453 were examined by the staff of the Bootle Health Department, and the other 2 were investigated by their private doctors. Altogether 695 specimens of faeces and 694 specimens of urine were submitted to the Department's bacteriologist, and in addition 477 specimens of blood, some for agglutination test and some for culture, were taken from patients by the Department's medical officers.

In ten instances significant bacteriological findings were made, and these are recorded in Table II. Reference to this Table shows that 7 persons in the bakery were found to be harbouring salmonella organisms other than *S. paratyphi B* Vi-phage type 2, and these along with the paratyphoid excretors were put off work until the danger of the spread of infection had passed.

The management of the bakery were informed that if necessary the wages of these employees, while they were off work, would be paid by the Bootle Corporation in accordance with the provisions of the Bootle Corporation Act, 1930, but the management of the bakery themselves met this expense and made no claim on the Corporation.

As synthetic cream was thought to be the most likely vehicle of infection, investigations were commenced in the section of the bakery where this cream was handled, but the investigations as they proceeded indicated that the infection was being spread by jam sandwich cake, and in fact it was found to be due to a carrier employed on spreading jam on the cakes after baking.

In view of the widespread distribution of cases which occurred over the area where the firm's products were sold, the Liverpool Public Health Department and the other local authorities concerned were kept fully informed of the progress of the investigations at the bakery, and of the results of the bacteriological examinations.

TABLE I.

SHOWING THE DISTRIBUTION OF CASES ON MERSEYSIDE.

Authority	No. of notifications	Confirmed cases due to <i>S. paratyphi B.</i>	No. of cases Vi-phage Type 2	Others	Negative cases
Bootle ... ...	27	15	13	1 (Type 1) 1 (Type 3AI)	12
Liverpool ...	140	77	65	4 (Type 1) 8 (Not typed)	63
Crosby ... ...	30	18	17	1 (Not typed)	12
Litherland ...	1	—	—	—	1
Roby ... ...	2	2	1	1 (Not typed)	—
Birkenhead ...	29	11	11	—	18
Totals ... ...	229	123	107	16	106

TABLE II.

Case No.	Department	Result Available	Blood Agglutination for <i>S. Paratyphi B.</i>			T.A.B.		Remarks
			Faeces	Urine	H.	O.	group	
1	Confectionery	...	16/7/49	<i>S. paratyphi B</i> V-phage Type 2 present	<i>S. paratyphi B</i> V-phage Type 2 present	Pos. 1/160	Pos. 1/20	Pos. 1/40
2	Rusk	...	26/7/49	<i>S. paratyphi B</i> V-phage Type 2	—	Pos. 1/5120	Pos. 1/160	Pos. 1/2560
3	Ovenman	...	29/7/49	<i>S. paratyphi B</i> V-phage Type 2	—	Pos. 1/640	Neg. 1/20	Pos. 1/80
4	Clerical	...	27/7/49	<i>S. paratyphi B</i> untypable	—	Neg. Neg.	Neg. Pos. 1/20	Neg. No.
5	Creamery	...	15/7/49	<i>S. thompson</i> present	—	—	—	Symptomless excretor
6	Confectionery	...	30/7/49	<i>S. thompson</i> present	—	Pos. 1/2560	Pos. 1/40	Yes No.
7	Confectionery (tray packer)	...	16/7/49 & 2/8/49	<i>S. thompson</i> present	—	Neg. 1/20	Pos. 1/20	Symptomless excretor
8	Retail Vans	...	3/8/49	<i>S. thompson</i> present	—	Pos. 1/80	Pos. 1/160	Yes Yes
9	Bakery	...	3/8/49	<i>S. thompson</i> present	—	Pos. Neg. 1/320	Pos. 1/160	Yes Yes
10	Bakery	...	16/7/49	<i>S. dublin</i> present	—	Pos. 1/160	Pos. 1/40	Symptomless excretor

## Section IX.

### Tuberculosis

*Notification Register.*—The register on 31st December, 1949, included 271 males and 256 females suffering from pulmonary tuberculosis, and 53 males and 64 females suffering from non-pulmonary tuberculosis, making a total of 644 cases as compared with 583 at the end of 1948.

*Incidence.*—The number of new cases notified during the year under the Public Health (Tuberculosis) Regulations, 1930, was 181 (164 pulmonary and 17 non-pulmonary).

Notifications during recent years were as follows:—

Year.						Tuberculosis Notifications.
1940	...	...	...	...	...	150
1941	...	...	...	...	...	142
1942	...	...	...	...	...	169
1943	...	...	...	...	...	186
1944	...	...	...	...	...	162
1945	...	...	...	...	...	173
1946	...	...	...	...	...	190
1947	...	...	...	...	...	152
1948	...	...	...	...	...	167

*Mortality.*—The number of deaths caused by tuberculosis during the year was 73 amounting to 9·32 per cent. of the deaths from all causes and giving a death-rate from this cause of 1·04 per 1,000 of the population, as against 0·92 last year.

*Dispensary Register.*—On 31st December, 1949, the number of cases receiving treatment was 509 as against 490 on 31st December, 1948.

### Pulmonary Tuberculosis.

*Incidence.*—One hundred and sixty-four new cases suffering from pulmonary tuberculosis were notified during 1949, an increase of 27 over the previous year. The numbers notified during the preceding five years were as follows:—

Year.	Notifications of Pulmonary Tuberculosis.					
1944	...	...	...	...	...	135
1945	...	...	...	...	...	142
1946	...	...	...	...	...	161
1947	...	...	...	...	...	123
1948	...	...	...	...	...	137

In three cases the first intimation was obtained from the death returns, while in 14 other cases notification was made at intervals of less than three months before death. The non-notified cases, therefore, numbered 4·5 per cent. of the total of 66 deaths from pulmonary tuberculosis.

*Mortality.*—During the year 66 deaths were certified to be due to pulmonary tuberculosis, representing a rate of 0·94 per 1,000 of the population, as compared with 0·80 in 1948, 0·81 in 1947, 1·04 in 1946, and 0·87 in 1945. There were 31 deaths among males and 35 among females.

*Chest Clinic.*—During the year the Tuberculosis Officer examined 370 patients newly referred, of whom 38 were sent by the School Medical Officers for opinion preliminary to notification. Attention continued to be paid to securing the attendance for examination of contacts of notified cases, and during the year 140 were so examined. The Tuberculosis Visitor made 516 visits to homes of tuberculous patients.

### Non-Pulmonary Tuberculosis.

During the year 17 new cases of non-pulmonary tuberculosis were notified, as compared with 30 in 1948, namely:—7 bones and joints, 4 glands, 3 meninges, and 3 other sites.

*Public Health (Prevention of Tuberculosis) Regulations, 1925.*—There was no occasion to take action under the above Regulations relating to tuberculous employees in the milk trade.

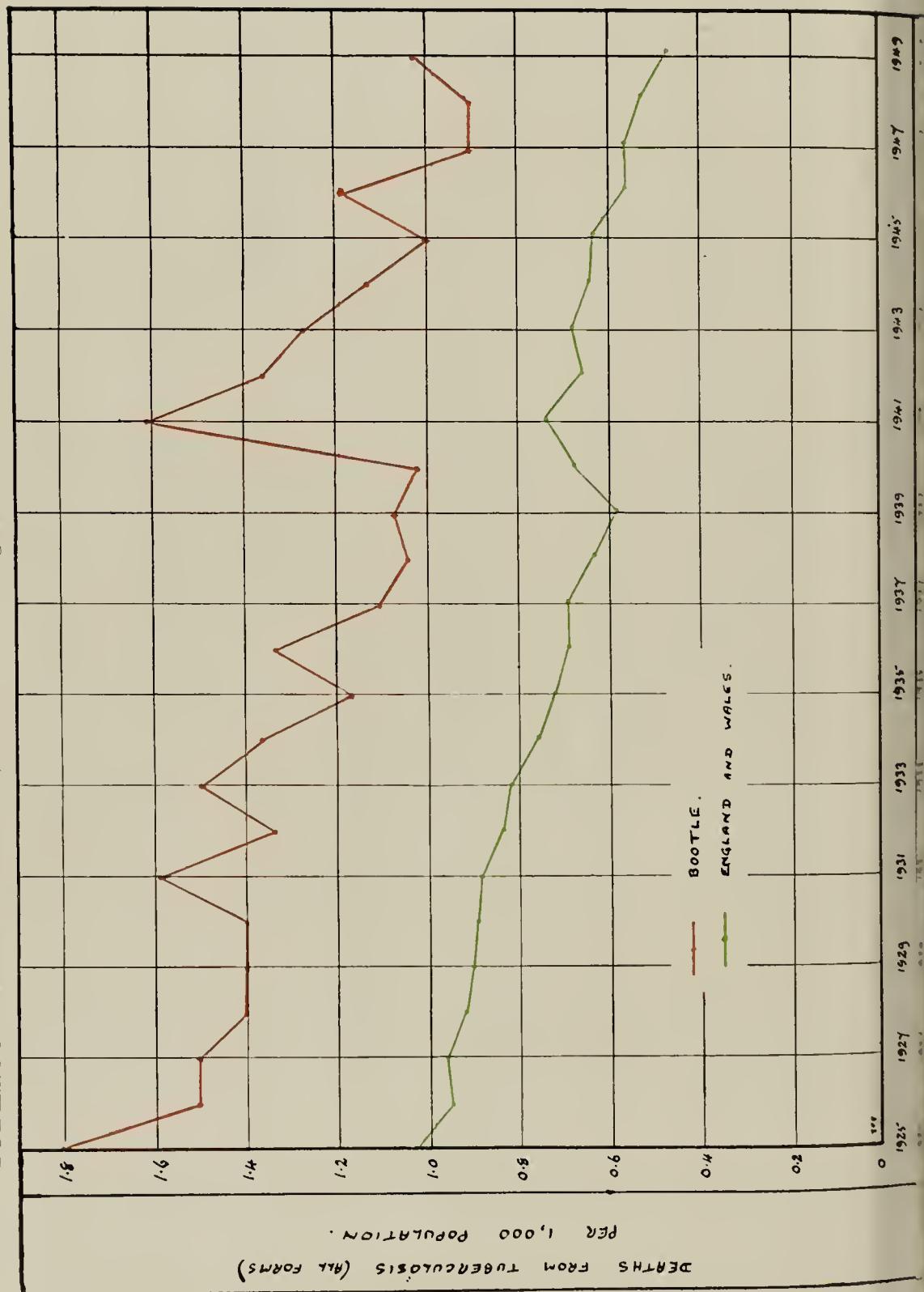
*Public Health Act, 1936: Section 172.*—No action was taken under this Section dealing with the compulsory removal of cases of tuberculosis to hospital.

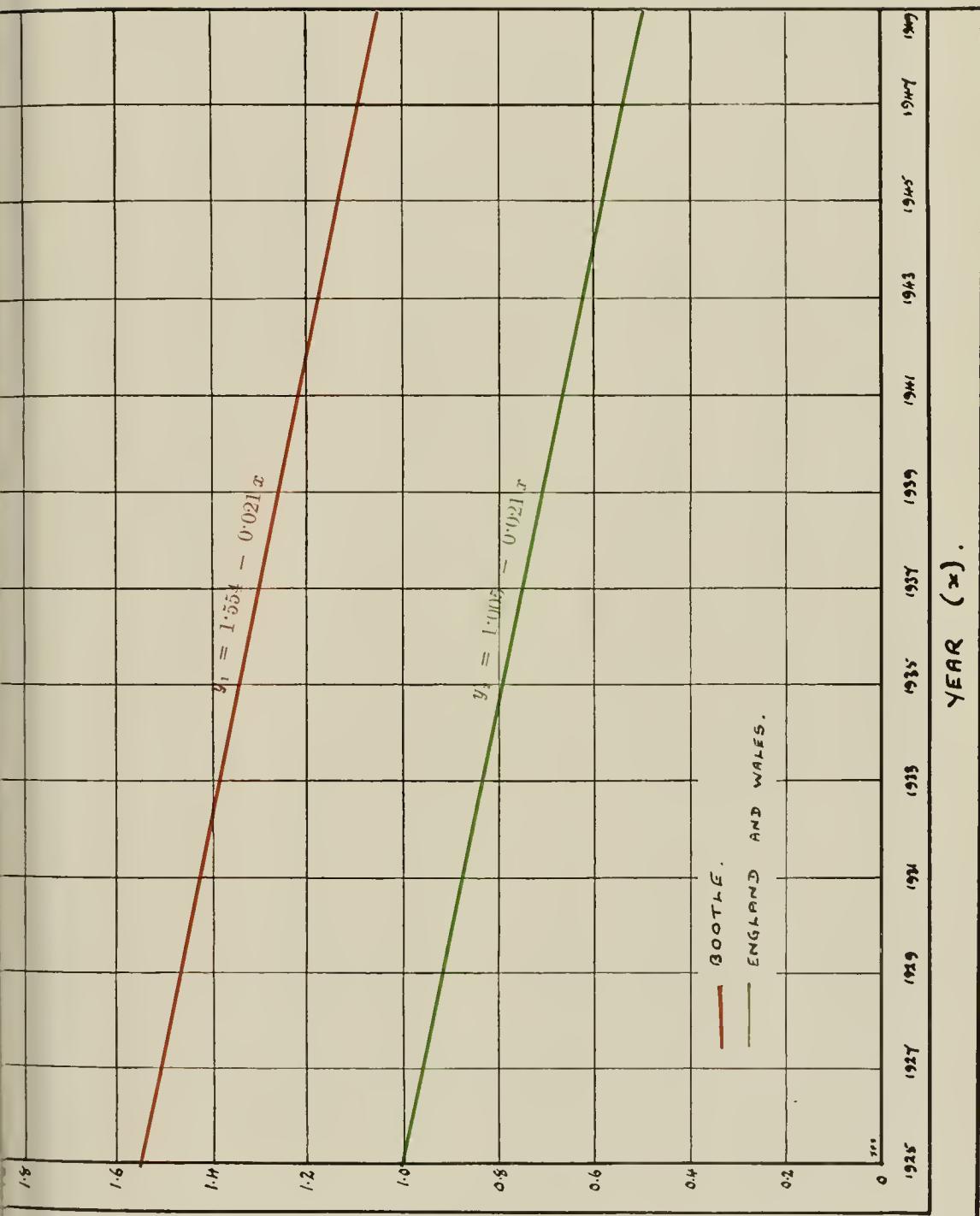
TUBERCULOSIS MORTALITY, BOOTLE AND  
ENGLAND AND WALES, 1925-1949.

Deaths from Tuberculosis (All Forms)  
per 1,000 population.

Year.	BOOTLE.	England and Wales.
1891-1900	2·17	2·01
1901-1910	1·76	1·65
1911-1920	1·82	1·42
1921-1925	1·70	1·08
1925	1·8	1·04
1926	1·5	0·96
1927	1·5	0·97
1928	1·3	0·93
1929	1·3	0·91
1930	1·3	0·90
1931	1·59	0·89
1932	1·34	0·84
1933	1·50	0·82
1934	1·37	0·76
1935	1·17	0·72
1936	1·34	0·69
1937	1·11	0·69
1938	1·05	0·63
1939	1·08	0·58
1940	1·03	0·67
1941	1·62	0·73
1942	1·37	0·65
1943	1·28	0·67
1944	1·14	0·63
1945	1·01	0·62
1946	1·20	0·55
1947	0·92	0·55
1948	0·92	0·51
1949	1·04	0·45

## TUBERCULOSIS MORTALITY, Bootle and England and Wales, 1925-1949.





DEATHS FROM TUBERCULOSIS (ALL FORMS).

PER 1,000 POPULATION.

GREATS FROM TUBERCULOSIS (ALL FORMS)

## Section X.

### Venereal Diseases

The treatment of Venereal Disease became the responsibility of the Regional Hospital Board as from 5th July, 1948.

The Annual Statistical Report of the Medical Officer of the Treatment Centre shows 599 persons under treatment on 31st December, 1949, as against 590 on 1st January, 1949, and a slight increase in new cases, the figure being 438, as contrasted with 436 in 1948. The total of 438 included 139 cases in which the diagnosis of venereal disease was not established; there was a slight increase in the new cases of gonorrhoea.

The total attendances for treatment made at the Centre during the year show a decrease from 6,980 to 5,734, the figure includes 441 attendances made between clinic days for the treatment of gonorrhoea at the irrigation centre. The average attendance at the male clinics was 23, and at the female clinics 9. During 1949, 220 cases were discharged on completion of treatment and observation, as against 276 in the previous year.

The following table is a statement of the number of cases presenting themselves for treatment during the last six years:—

BOOTLE VENEREAL DISEASES CLINIC.

	1944	1945	1946	1947	1948	1949
New Cases (total) ... ... ...	421	433	356	450	436	438
New Cases (syphilis) ... ... ...	89	84	94	92	75	66
New Cases (gonorrhoea) ... ... ...	117	206	249	186	162	168
Total attendances (excluding Irrigation Department) ... ... ...	9407	8847	8786	7791	6227	5293
Irrigation Department attendances ...	2261	1713	793	561	753	441
In-patient Days ... ... ...	178	106	140	104	22	...
No. discharged after completion of observation and treatment ... .	198	212	270	250	276	240
No. who ceased to attend after completion of treatment, but before final tests as to cure ... ... ...	1	11	44	135	87	42

Bootle residents accounted for 33·3 per cent. of the new cases under treatment at the Bootle Hospital Centre, the Authorities contributing the next largest number of cases being Liverpool with 19·2 per cent. and Lancashire County Council with 15·0 per cent.

## Section XI.

### Housing

The provision of adequate housing accommodation remains one of the most pressing needs of the Borough. The following information relating to applications for the tenancy of Corporation houses up to 31st December, 1949, has been supplied by the Housing Manager.

No. of applicants living in rooms inside the Borough ...	2212					
do.                        outside do.       ... 565						
Total No. of applicants living in rooms ... .. ...						2777
No. of applicants who are householders inside the Borough	778					
do.                        outside do.       270						
Total No. of applicants who are householders ... ..						1048
Total No. of applicants ... ... ... ...						3825

The total number of applicants on the waiting list increased during 1949 by 603, the total at the end of 1948 being 3,222. It is also worthy of note that the waiting list was closed for 7 months of 1949 (April to November) except to those applicants who could prove they had resided continuously in the Borough since September, 1949.

Of the non-householder applicants at present on the list, 83 per cent. have not more than two children. Applications are mainly from young married couples.

The Borough Engineer has supplied the following information relating to houses erected during the year.

Houses erected by Local Authority—A.3 Type	...	53
A.4 Type	...	4
B.3 Type	...	4
		— 61
„ „ „ other bodies and persons	...	...
„ „ „ other Local Authorities	...	Nil

No houses were demolished during the year by the Local Authority, or by other bodies and persons.

## Section XII.

### Blind Welfare

The administration of the Council's Blind Welfare Scheme is the responsibility of the Social Services Committee.

The number of blind persons on the register at the end of 1949 was 158 (79 males and 79 females). The number of partially sighted persons on the register was 23 (4 males and 19 females).

## **Section XIII.**

### **Sanitary Conditions**

The year has been marked by increased activity in food hygiene, smoke abatement, housing, shops, factories and workplaces. War-time exigencies, a depleted staff and the unavoidable shortage of materials had caused the inspectors to concentrate on the abatement of routine sanitary nuisances. The gradual improvement in the general situation with an increase in staff, has made it possible to devote more time to the other important aspects of sanitation.

Mr. W. Robson, the former Chief Sanitary Inspector, retired in September, 1948, having had a difficult and anxious time during his later years. During the war years he was responsible for decontamination of clothing and food-stuffs, and in common with all sanitary inspectors his difficulties were increased by war damage suffered throughout the Borough. These extra duties were accomplished with a comparatively small staff, depleted by war-time requirements. Mr. Robson served the Borough twenty-eight years, commencing in 1920, and was appointed Chief Sanitary Inspector in 1935. He is now enjoying a well-earned retirement, which it is hoped will continue for many years to come.

Although the duties have increased considerably during the last twelve months, materials can now be obtained more easily, and the personnel engaged on structural repairs has increased. The development of the sanitary section has followed closely the broad principles already laid down, and the continued co-operation that we are obtaining from owners of property, food factory personnel and shop-keepers has contributed to the constant progress.

Every effort is being made to cope with the many new Acts, Orders and Regulations, but the most urgent duty is the repair of structural and sanitary defects. During the year there were 4,206 complaints from householders, and notices were served in respect of 10,454 nuisances, an increase of 1,653 complaints on the previous year and of 3,411 nuisances. In an effort to reduce the number of prosecutions, the "work in default" sections of the Public Health Act have been rigidly enforced, and the discomfort experienced by householders has been considerably relieved.

It is important that routine visitation should be introduced. Unfortunately house to house visitation cannot be accomplished by the existing staff, which is still below establishment, and in an effort to carry out this duty the assistance of the rodent operators has been obtained. During their inspections for infestation by vermin they refer any outstanding sanitary nuisances to the District Sanitary Inspector. It is anticipated that by this method all dwelling-houses will be visited periodically, and the prevention of insanitary conditions will receive early attention.

The prevention of the spread of infectious disease and the supervision of the premises used for the preparation and sale of food, milk or ice-cream have been given particular attention, as has also the enforcement of the provisions of the Food and Drugs Act relating to the adulteration and misrepresentation of foodstuffs, the inspection of cases of overcrowding, the inspection of canal boats, and other special duties occurring from time to time.

During the summer all the staff were engaged, under the guidance of the Medical Officer of Health, in investigating an epidemic of food poisoning. Investigations were carried out to trace the source of infection, and 853 specimens of faeces were obtained from 576 persons to trace suspected carriers. Samples of ice-cream and confectionery were taken from shops and food factories situated within the Borough. Eventually the efforts proved successful, the source of the infection being traced to a carrier engaged in the preparation of food, and the danger eliminated.

In connection with the promotion of the Bootle Extension Bill, 1950, surveys on housing conditions were carried out in order to determine the action considered desirable with regard to the demolition, repair or reconditioning of houses and to ascertain the extent of sub-letting. It was noted with concern that 5,594 houses were without baths, and in 4,824 houses rooms were sub-let.

Smoke pollution, although reduced, is still excessive, and the inspectors are spending considerable time on observations and in advising factory personnel, particularly in Derby Ward, in the areas adjoining Hawthorne Road and Linaere Lane.

**Public Health Act, 1936.****SUMMARY OF NUISANCES.**

Choked, defective drains ... ... ... ... ...	467
„ „ rainwater pipes ... ... ... ...	1,152
„ „ wastepipes ... ... ... ...	254
Defective water closets ... ... ... ...	1,657
„ house roofs ... ... ... ...	704
Defects in domestic water supply ... ... ... ...	377
Defective yard surfaces ... ... ... ...	307
Dampness in dwellings ... ... ... ...	826
Defective plasterwork walls, ceilings ... ... ... ...	1,262
Defective windows ... ... ... ...	930
Other defects ... ... ... ...	3,044
<hr/>	
Total ... ...	10,980
<hr/>	
Nuisances abated by owners ... ... ... ...	7,754
Nuisances abated by Corporation (Default/request) ...	626
<hr/>	
Total ... ...	8,380
<hr/>	

**Food and Drugs Acts.****SAMPLES SUBMITTED FOR EXAMINATION.**

Milk for analysis ... ... ... ... ...	116
Other foods for analysis ... ... ... ...	128
Milk for bacteriological examination ... ... ...	117
Milk for Heat Treatment—Phosphatase Test ...	100
Ice cream for bacteriological examination ...	32
Synthetic cream for bacteriological examination ...	14
Fertilisers and feeding stuffs ... ... ...	10
Specials for chemical and bacteriological examination ...	25
<hr/>	
Specimens obtained for bacteriological examination from food handlers ... ... ... ...	853
<hr/>	

Unsound food condemned and disposed of by Salvage,  
or destroyed ... ... 15 tons, 15 cwt., 3 qrs., 5 lb.

## SANITARY, FOOD AND HOUSING INSPECTIONS, 1949

	Visits	Notices Served	Nuisances	Abated	Out-standing
<b>SANITARY COMPLAINTS :—</b>					
Houses inspected and re-inspected ...	14,815	—	—	—	—
No. of special complaints investigated	4,206	3,460	10,980	8,380	2,600
<b>ROUTINE INSPECTIONS :—</b>					
Inspection of schools ... ... ...	12	—	—	—	—
" " piggeries ... ...	46	—	—	—	—
" " canal boats ... ...	36	—	—	—	—
" " stables ... ...	16	—	—	—	—
" " lic. prem. (Pub. Houses)	51	—	—	—	—
" " dairies ... ... ...	226	—	—	—	—
" " cow sheds ... ...	21	—	—	—	—
" " milk shops ... ...	64	—	—	—	—
" " bakehouses ... ...	154	—	—	—	—
" " butchers' shops ...	195	—	—	—	—
" " fishmongers ... ...	48	—	—	—	—
" " grocers' shops ...	190	—	—	—	—
" " fruiterers' shops ...	54	—	—	—	—
" " dining rooms (including cafes, restaurants and canteens) ...	138	—	—	—	—
Inspection of cold stores ... ...	2	—	—	—	—
" " ice cream premises ...	149	—	—	—	—
" " fish and chip shops ...	126	—	—	—	—
" " food factories ... ...	132	—	—	—	—
" " factories ... ...	418	—	—	—	—
" " workplaces ... ...	100	—	—	—	—
Obs'v'tions for atmospheric pollution	78	—	—	—	—
Total notices served in respect of routine inspections ... ... ...	—	190	538	488	50
<b>SPECIAL INSPECTIONS :—</b>					
Investigation of infectious diseases ...	279	—	—	—	—
Disinfections carried out after notified infectious diseases ... ...	336	—	—	—	—
Investigations for food poisoning ... of swimming baths ...	69	—	—	—	—
Housing applications/over-crowding ...	100	—	—	—	—
Inspection of Corp. houses/voids, etc.	196	—	—	—	—
Visits—issue of habitation certificates	111	—	—	—	—
Insp. of applications for re-housing	251	—	—	—	—
Fumigation of verminous houses ...	169	—	—	—	—
Treatment of furniture by hydro- cyanic acid, prior to occupation of Corporation houses ... ... ...	37	—	—	—	—
<b>MISCELLANEOUS INSPECS. &amp; VISITS :—</b>					
Interviews with owners, contractors etc.	—	—	—	—	—
Drain Testing ... ... ...	—	—	—	—	—
Nurseries ... ... ...	—	—	—	—	—
Re-visits infected houses ... ...	—	—	—	—	—
Contacts infectious diseases ... ...	—	—	—	—	—
Examination of vehicles in streets ...	—	—	—	—	—
General smoke observations ...	—	—	—	—	—
Special instruction for Student Sanitary Inspectors ... ...	—	—	—	—	—
Exhumations ... ... ...	—	—	—	—	—
Rag and bone dealers... ...	—	—	—	—	—
Second-hand furniture stores...	—	—	—	—	—
Storage for ice cream vehicles...	—	—	—	—	—
Cockroach infestation ... ...	—	—	—	—	—
Public health lectures and film shows	—	—	—	—	—
Enquiries re aged and infirm persons	—	—	—	—	—
Total miscellaneous inspec. and visits	875	—	—	—	—
<b>HOUSING SURVEYS :—</b>					
Number of houses visited to ascertain bathroom facilities and sub-letting	16,121	—	—	—	—
Number of houses inspected in Re- construction Areas to estimate valuation, cost to render habitable, overcrowding, etc. ... ...	925	—	—	—	—
Number of houses inspected in areas adjoining Reconstruction Areas in proposed Clearance Areas ... ...	214	—	—	—	—
<b>TOTAL NUMBER OF VISITS ...</b>	<b>40,962</b>	<b>3,650</b>	<b>11,518</b>	<b>8,868</b>	<b>2,650</b>

## Food and Drugs.

The incidence of food poisoning, coupled with the increasing interest in food hygiene, is resulting in every effort being made to incorporate modern standards and a higher quality of workmanship in food premises.

Sampling is carried out regularly, and visits are made to shops, food factories, milk premises and ice-cream distributors throughout the Borough. In spite of the care that is exercised by wholesalers and retail distributors, and notwithstanding strict supervision by the inspectors, instances have occurred of dirty milk bottles, glass in milk bottles, insects in certain foods and excessive preservatives in foods.

The Public Analyst, Mr. J. F. Clarke, M.Sc., F.R.I.C., examined 257 samples of food and drugs during the year, of which 103 were statutory and 154 informal. Common foods have been sampled regularly, and special samples have been taken of suspected foods.

A total of 21 samples contravened Acts and Regulations, and included suet, sausage meat, sausage, candied peel, condensed milk, raw milk, glycerine and cereals. A sample of imported condensed milk was deficient in weight to the extent of 9·3 per cent. of that stated on the label. Legal action was taken in respect of the sausages and candied peel, and the vendors concerned were fined. A report was submitted to the Minister of Food, as required under the regulations, with regard to the condensed milk.

There has been no increase in the adulteration of food or milk, and in only four cases was serious adulteration suspected. In one case milk was delivered by road in an emergency, in a container not provided with proper mixing apparatus, resulting in a deficiency in fat in the sample taken. In two other cases legal action was taken, and in the fourth a formal sample was found to be satisfactory.

One informal sample of glycerine was found to contain a small amount of water. Formal samples will be taken.

In addition to the 244 routine samples submitted for analysis and examination there were 3 special samples comprising barley flakes, wedding cake and milk subjected to chemical analysis. The barley flakes had been stored for a considerable period and were infested with insects. The wedding cake was found to be unfit for human consumption, having been prepared with unsound fat and substitute marzipan infested with insects. The milk contained *Drosophila buskii* in the adult stage, and also a number of empty larva cases. The eggs of this fly may have been deposited in bottles standing on the side of the road, and were capable of resisting normal sterilization processes.

There were 4 special samples submitted following cases of suspected food poisoning. These consisted of 3 tinned meats and 1 meat pie.

Complaints were received concerning foods, including bottled milk containing a snail, bottled milk containing glass, dirty milk churns and bottles, dirty bread, cereals containing weevil, mineral water containing paraffin oil, maggots in oats, glass in cereals, unsound "off points" sweets, and mould in raw beef. Of all the samples submitted for analysis only 24 were found to be unsatisfactory in accordance with the requirements of the Food and Drugs Act, 1938.

Samples totalling 274 were submitted to the City of Liverpool Bacteriologist, Professor D. T. Robinson.

The samples submitted during 1949 included the following :—

### **Public Health (Preservatives in Food) Regulations, 1925 - 1927.**

The Public Analyst examined all samples submitted for evidence of preservatives. An informal sample of candied peel was found to contain an excess of sulphur dioxide to the extent of 200 parts per million. Formal sample and legal proceedings were taken in 1950.

### **Registration of Factories and Wholesale Premises, Food and Drugs Act, 1938, Section 34.**

(a) Registered margarine factories ...	...	...	...	1
(b) Registered wholesale dealers in margarine ...	...	...	7	
(e) Registered butter factories ...	...	...	...	Nil
Total inspections of registered premises ...	...	...	...	8

### **Milk**

*Milk Supplies.*—During the year 1949 the Milk and Dairies Act, 1944, and the Milk (Special Designations) Regulations, 1949, came into operation and required the registration of all premises selling bottled milk. Premises selling sterilized milk had to be licensed, and alterations were made to conform with the new regulations.

There is only one dairyman selling raw milk in the Borough, the remainder selling either Tuberculin Tested, Pasteurized or Sterilized milk.

There are no farms or shippings situated within the Borough boundaries, the last remaining cowkeeper having removed his eows early in the year.

The amount of milk consumed within the Borough is steadily increasing, and it is estimated that some 8,500 gallons are consumed daily. With the exception of 20 gallons all this milk was subjected to pasteurization or heat treatment, or was from tuberculin-tested herds.

Regular inspection of all plant is carried out by a special Inspector, the milk being sampled throughout the entire processing system. In two cases extensive alterations were carried out to the premises.

Where a sample of milk indicates that there has been insufficient heat treatment, immediate inspection is made to ascertain the cause of the failure in the plant and remedial measures taken. There has been no infectious disease or food poisoning outbreak traced to the supply of milk within the Borough.

*Milk Shops and Dairies.*—There are 65 milk shops and 17 dairies selling bottled milk, all of which are registered and have licences under the regulations.

During the year 290 inspections were made of these premises and a reasonable standard of cleanliness is maintained.

There has been a weekly inspection of the pasteurising plant in the Borough. This plant deals with 3,500 gallons of milk daily, of which 1,803 gallons are consumed within the Borough. There were 66 samples of milk obtained from this plant for the bacteriologist, and of these all passed the Phosphatase Test but four failed to pass the Methylene Blue Test. The cause of this failure has since been ascertained and remedied.

There have been no legal proceedings instituted against milk vendors within the Borough.

*Hospital: Milk Supply.*—Milk sampling is carried out periodically at Bootle General Hospital, and 7 samples were taken during the year. Three were submitted for chemical analysis, and 4 for bacteriological examination. The former satisfied all legal standards. Four passed the Methylene Blue Test, and 3 the Phosphatase Test.

*Milk Sampling.*—There have been 117 samples of milk submitted for the Methylene Blue Test and 100 for the Phosphatase Test to indicate the amount of heat treatment to which the milk has been subjected. Nine failed to satisfy the Methylene Blue Test, and 2 the Phosphatase Test. The nine failing to pass the Methylene Blue Test included 4 where the average shade temperature exceeded sixty-five degrees. The other five were investigated, and action was taken to obviate the risk of bacteriological contamination occurring in the future.

With regard to the 2 samples failing to pass the Phosphatase Test, the inadequate heat treatment had taken place outside the Borough.

*School Milk.*—There were 16 samples of milk obtained from schools for bacteriological examination. Four samples failed to pass the Methylene Blue Test and 1 failed to pass the Phosphatase Test. There were 11 samples submitted for chemical analysis, and all were satisfactory.

The action taken with regard to the unsatisfactory samples is included in the paragraph on milk sampling above.

### **Registration of Food Preparation Premises.**

Premises registered under section 14 of the Food and Drugs Act, 1938, total 73, including those of ice-cream retailers, those used for the preparation of sausages, potted or preserved meat, fish or other foods, certain butchers' shops and food factories. There were 321 inspections made of these premises, and the requirements of section 13 of the Food and Drugs Act, 1938, relating to structure, sanitation, ventilation and removal of refuse were applied.

There were 5 new applications for registration made during the year, and after extensive structural alterations the premises were registered.

### **Dining Rooms, Cafes and Kitchens.**

There is still a considerable amount of work required in these premises, particularly with regard to the covering of foods, handling during serving, cooking, and general cleanliness.

Constant visitation and the service of notices has produced an improved standard.

There have been 138 inspections of dining rooms and cafes, the total number of premises used for this purpose being 32. Three British Restaurants were closed during the year.

No legal proceedings have been instituted against the owners of any of these premises, as any suggestions made by the inspectors have been voluntarily adopted.

A difficulty in this type of trade is staff education, the temporary nature of the work in some cases causing constant change. The Health Education Officer is assisting considerably by showing films, and distributing literature to personnel.

An application to establish a cafe in a basement was refused. This decision was subsequently submitted to an appeal under the Town and Country Planning Acts, and the decision of the Local Authority was upheld.

**Ice Cream.**

A new modern ice cream factory was built during the year, and an existing factory reconstructed with modern plant fitted throughout.

Ten samples of ice cream were submitted for chemical analysis, and it was found that the fat content ranged between 2·7 per cent. and 10 per cent. Eight of the samples concerned were below 6·7 per cent. fat content, and the average fat content of all samples was 7·12 per cent.

There are 51 ice cream premises registered, but only 12 have been registered for manufacture, the remainder obtaining supplies from wholesalers. Wherever possible wrapped ice cream in electric conservers is being recommended.

Twenty-eight samples were submitted for bacteriological examination, results being as follows:—Grade 1, 5; Grade 2, 7; Grade 3, 8; Grade 4, 8.

Persons selling ice cream from vehicles require to be registered in accordance with the Bootle Corporation Act, 1930. The vehicles are inspected before licensing, together with the washing arrangements and the premises where the ice cream is stored at the end of the day. Where a vendor is living in the area of another authority, communications have been addressed to the responsible officer and a report obtained as to the suitability of the person applying for registration and of his premises.

No case of infection reported during the year could be traced to ice cream consumption.

**Bakehouses**

There are 19 bakehouses situated in the Borough, and special hygienic precautions are being taken in these premises. The washing of hands is insisted upon, and cigarette smoking discouraged.

One basement is still in use for this purpose, and is subject to special registration.

An application to establish a bakehouse adjacent to Pine Grove Destructor was refused, and the premises have since been used for another purpose.

Inspections made during the year numbered 154.

### **Unsound Foods Condemned :-**

Total weight, 15 tons 15 cwts, 3 qrs, 5 lb.

*Meat (raw).*—Beef, Sausage, Pigs feet and tails, Pigs maws, Bacon, Rabbit.—Total raw meat, 2,400 lb.

*Meat (tinned).*—Corned beef, Meat roll, Corned mutton, Assorted tinned meats.—Total canned meat, 487 lb.

*Fruit, etc. (raw).*—Dates, Figs, Nuts, Prunes, Beetroot, Peas, Raisins.—Total raw fruit, 18,273½ lb.

*Fruit, etc. (canned).*—Chutney. Tinned fruit, Beetroot, Prunes, Apples, Vegetables.—Total canned fruit, 1,263 lb.

*Fish (raw).*—563 lb.

*Fish (canned).*—285½ lb.

*Milk (canned).*—2,085 lb.

*Other Foods (raw and canned).*—Salad dressing, Soup, Pudding mixtures, Jam, Canned puddings, Oats, Potato Flour, Almond substitute, Cereals, Eggs (shell), Eggs (dried), Cheese, Barley Flakes.—Total, 10,012 lb.

### **Infectious Disease.**

There were 279 cases of infectious disease investigated, other than tuberculosis, and disinfections were carried out in 336 cases.

In dealing with outbreaks of food poisoning special investigations were carried out in the homes of food handlers in order to detect any possible carriers of disease in their families. Where any food handler was found to be suffering from or to be a carrier of the organisms of food poisoning the management of the canteen or food factory was informed and in every case a period of leave with pay arranged until the danger had been overcome.

Smallpox contacts were traced and kept under observation until the expiration of the incubation period of the disease.

Infectious disease cases nursed at home were kept under observation, and advice was given as to preventing the dissemination of infection. Where isolation was found to be impossible, arrangements were made for removal to hospital.

The local authority have now been made responsible for the removal of all cases of infectious disease landed from ships in Bootle Docks.

## **Water Supply.**

The Borough of Bootle is supplied with water by Liverpool Corporation, the source being upland surfaces in North Wales and Lancashire. It is wholesome and sufficient for all purposes. Periodical bacteriological examinations in the Borough are made by the water undertakers and reports submitted to the Medical Officer of Health.

Throughout the year complaints concerning the water supply have been reduced to a minimum by constant co-operation between the inspectors and the Liverpool Corporation Water Department.

The 377 complaints related mainly to waste, or to damage caused by burst pipes.

## **Prosecutions for Non-Abatement of Nuisances - Public Health Act, 1936,** **Section 93.**

There were no prosecutions for the non-abatement of sanitary nuisances during the year. Prosecutions have been reduced to a minimum by personal contact, and also by the Corporation carrying out the work in default, as provided for by statute.

It is to be regretted that the Public Health Act is being used as a palliative to secure the abatement of nuisances in insanitary property which should be dealt with under the provisions of the Housing Acts, and consequently only matters of an urgent sanitary nature are remedied in this type of property, improvements and reconditioning being impracticable.

The age of the premises, together with restricted space, prevents the installation of bathrooms or even the addition of an annexe, to comply with modern standards in the majority of these sub-standard houses, from which complaints are constantly being received.

## **Rats and Mice Destruction Act, 1919 - Infestation Order, 1943.**

There are three permanent rodent operators engaged in carrying out duties under the above mentioned regulations.

It is anticipated that new legislation will assist considerably in removing many difficulties that have existed in the administration, particularly with regard to responsibility for the extermination of vermin and the disinfection of premises.

The staff are carrying out continuous visitation of all premises in the Borough, and all factors giving rise to infestation are immediately dealt with. Many cases necessitate the taking up of floors, yard surfaces and passages, leading in some cases to extensive drainage repairs and reinstatement.

The systematic treatment of sewers is assisting considerably in the prevention of surface infestation. It has been ascertained that there are now many sections of the sewerage system free from rodent infestation, and evidence of this has been ascertained by test-baiting.

Systematic inspection of private dwelling-houses continued, and during the year 15,747 were inspected. One hundred and two were found to be infested with vermin, 31 by rats and 71 by mice. The number of complaints from occupiers has been reduced to a very small number, and only 166 complaints were received.

*Inspection of Lands and Buildings.*—There were 6,039 inspections of lands and buildings, comprising food shops, retail shops, factories, warehouses, schools, offices and cold stores. One hundred and thirteen of these premises were found to be infested, 46 by rats and 67 by mice. The staff treated 52 of these infestations, the remainder being dealt with by servicing companies under the supervision of the rodent operators. There were 1,768 poison baits deposited by the staff, and of these 869 were taken.

*Sewer Treatment.*—The sewers have been treated on two occasions, and during April and May, after a ten per cent. test, it was found necessary to treat 1,492 man-holes. In 271 man-holes infestation by rats was found. During October and November another treatment was carried out, and 1,664 man-holes were treated, revealing signs of infestation in 354 man-holes. A further test has been carried out in the new sewers which have been laid in the Borough during the year.

*Refuse Tips.*—The refuse tips at Melling and Dunnings Bridge Road have also been treated during the year. At Melling the infestation was of a major type, and has now been satisfactorily disinfested. The Dunnings Bridge Road tip has required continuous treatment throughout the year.

*Causes of Infestation.*—The majority of infestations are found in food storage premises, and the rodent operators have concentrated on all premises containing food in an effort to secure adequate storage and prevention of rodent infestation.

There is no evidence that food bins situated in the streets attract rodents, but there are many complaints of food bins being carelessly handled by children and adults, lids being left off and the bins thereby exposed to animals.

### **Smoke Abatement.**

The essentially industrial character of the Borough is causing an atmospheric pollution problem of some magnitude. Considerable improvement has been obtained, but further efforts are necessary to reduce the sources of pollution.

The use of inferior types of fuel is giving rise to excessive smoke, and it would appear to be beyond the control of managements to reduce this emission.

The problem has been tackled in a sympathetic and energetic manner, alterations to plant have been carried out, mechanical stokers have been installed wherever possible, and the Ministry of Fuel, upon a personal request, have co-operated by supplying an improved graded fuel to the factories having difficulty in preventing smoke emission. The Regional Officer for the North Western Gas Board has been approached regarding extensive alterations to the Gas Works, and consideration is being given to suggested improvements.

General observations have been made throughout the year, and 78 official observations taken. As a result of these observations, 5 notices have been served upon persistent offenders. In the remaining cases management and personnel have been interviewed and advice given to stokers where necessary, or the source of mechanical difficulty ascertained.

The causes of smoke emission included inefficient stoking, unsuitable fuel and defective plant. Three cases were reported informally to the Health Committee, but before statutory action was taken the firms concerned had applied measures to remedy the nuisance.

Training courses in smoke abatement are held at the Liverpool University School of Hygiene, and every effort is made to persuade stokers to attend this course.

Efforts to improve the atmosphere are to some extent offset, as Bootle is subject to considerable pollution from the Dock Estate and surrounding industrial areas.

It is pleasing to note that although there have been a number of infringements throughout the year, it was not necessary to institute court proceedings, immediate action being taken voluntarily by all concerned.

### **Factories.**

Periodical visitation of factories has been made, and alterations, reconditioning and suggested improvements have been carried out under the supervision of the inspectors.

There are 212 mechanical factories and 64 factories without mechanical power. Four hundred and eighteen inspections have been made, and as a result of these inspections notices have been served in respect of 29 of these premises to secure cleanliness, adequate ventilation, drainage and suitable sanitation.

A number of the factories still require modern sanitation, although existing legislation does not specify types of sanitary accommodation. The managements of all factories concerned are keenly desirous of improving the standard of their premises.

The staff have given special attention to the disposal of industrial waste, and detailed inspection has been carried out during the installation of grit tanks, fat traps and intercepting chambers.

A new register of factories and workshops is being compiled, and it is anticipated this will be completed by next year.

### **Homeworkers.**

The homes of out-workers are visited regularly. At present there are seven out-workers on the register, and the premises have been found to be satisfactory.

### **Workplaces, Including Offices.**

The important work of inspection of these premises is being given special attention, and there is no doubt that some workers are working under conditions causing discomfort.

One hundred premises have been inspected, and alterations to secure improvement in 34 workplaces have been made.

A great improvement in office hygiene can be obtained by decoration, cleanliness of sanitary accommodation, ventilation and lighting. The notices include these requirements.

### **Second-hand Stores.**

Inspection of 14 second-hand stores has been maintained. This work is particularly important to prevent the spread of vermin and infection, particularly in certain areas where the cost of new furniture is more than can be comfortably afforded by the occupiers of houses, who rely upon second-hand clothing or furniture.

It is of particular importance that these articles should be clean and free from infection or vermin, and great importance is therefore attached to this work.

### **Cinemas.**

Inspection of the three cinemas in the Borough has been instituted. These inspections are important, for transmission of infection and vermin is difficult to prevent where large numbers of people congregate. Consequently, it is important that sanitary accommodation, ventilation, lighting, cleanliness and structural defects receive immediate attention.

### **Offensive Trades.**

There are two offensive trades carried on in the Borough, and 7 inspections have been made to prevent the emission of noxious fumes or the accumulation of offensive refuse.

There have been no applications for the establishment of further offensive trades during the year.

### **Public Sanitary Conveniences.**

There are 21 sanitary conveniences under the supervision of the Department; all of these provide for males and 4 of them make provision also for females.

The damage caused to public conveniences by carelessness and destruction is now being reduced by co-operation with the Police.

The public convenience staff consists of 4 males and 2 females, and they cleanse every public convenience at least twice a day, and in special cases three times a day. The ladies' conveniences are kept open until the hour of 10.30 p.m., and open again the following morning at 7.30 a.m.

Special attention is necessary to the public conveniences situated in North Park and South Park during the holiday periods, or when fair grounds are established. It is to be regretted that I have to report

that the public conveniences at North Park suffer considerably from damage and dirt during these periods, and it has been necessary to wash the internal walls daily due to the mud and filth that is thrown upon them during these periods.

The inspectors visit the conveniences regularly to supervise the cleansing, and 106 visits were made during the year.

### **Vermin Infestation.**

The routine procedure for disinfection of verminous premises has been maintained. Twenty-three municipal houses and 76 privately-owned houses were disinfested with suitable insecticides, and the furniture of 37 dwelling-houses was treated with hydrogen cyanide.

Special treatment has been adopted for cockroach infestation, and has been applied to 63 municipal houses, 7 privately-owned houses, 2 schools, 1 public bath and 1 British Restaurant.

Special steps have been taken with regard to certain pests, including ants, bed bugs, house flies and lice. This service has been carried out by the local authority at a nominal fee, the occupiers being only too happy to have the pests removed, and 83 occupiers have paid to have their premises disinfested.

### **Canal Boats.**

There were 36 inspections of canal boats on the Leeds and Liverpool Canal within the Borough. One notice was served and three infringements have now been remedied. No women or children were found on the boats during inspection. Bootle is not a registration authority.

### **Stables.**

During the summer months stables can be a source of considerable nuisance, and visits to stables are usually increased during this period. Fly infestation is a serious menace, and the methods now adopted are proving effective. D.D.T. is being used to an increasing extent in the spraying of stalls. As a result of 26 special visits to 14 stables, 16 notices were served to remedy defects to drainage, paving, midden-steeds, walls, windows and lighting.

It was found in a number of cases that pigs were being kept in stables contrary to the byelaws, and immediate steps were taken to have these animals removed.

### **Exhumations.**

The Sanitary Inspector was present at 2 exhumations at cemeteries within the Borough, in compliance with Home Office regulations for the insistence of care and decency, and the prevention of nuisance.

The bodies were re-interred in other parts of the cemetery, the work usually being carried out very early in the morning, and special care was taken to avoid passers-by observing the operation.

### **Nuisance from Noise.**

Noise nuisance gave rise to 4 serious complaints during the year from householders living near industrial premises.

The Medical Officer of Health visited the premises, and the efforts made proved successful in remedying the nuisances.

There are no *ad hoc* legal powers available to the Health Department, but it is anticipated that this matter will be dealt with under new legislation.

### **Swimming Baths.**

Inspection of swimming baths was carried on throughout the year, and samples of the water taken on two occasions.

During the winter months improvements were carried out to the chemical treatment plant.

### **Hairdressers and Barbers.**

These premises are not compulsorily registered, but the inspectors have visited 37 hairdressers during the year, applying general principles of hygiene and sanitation, usually under the provisions of the Public Health Act, 1936.

### **Rent Restriction Acts, 1920 - 1939.**

There were 2 applications received under the above Acts, but only 1 certificate was issued, as in the other case workmen completed the work before inspection of the premises.

### **Caravan Dwellings.**

There are no licensed caravan dwellers situated within the Borough, nor are there any sites for this purpose. Periodical fun fairs visit the parks and one other site, but as they are subject to special exemption licensing is not required.

From time to time gypsies visit the Borough, but when informed by inspectors that camping is not permitted they have moved away from the Borough.

### **Housing.**

Surveys have been made during the year to ascertain the housing situation in Reconstruction Areas 1 and 2 for consideration by the Housing and Planning Committees. Surveys have also been carried out to obtain information as to the number of houses without baths, the number of sub-let houses, the number of sub-standard houses, and the estimated ward populations.

In all 17,046 inspections of houses were carried out.

*Clearance Areas and Individual Unfit Houses, Housing Act, 1936.*—A survey was made of two areas of sub-standard houses not included in the confirmed Declaratory Order under the Town and Country Planning Acts, 1944 and 1947, 214 houses having been inspected for clearance, individual demolition or reconditioning.

A complete survey of all houses in the Borough is now being undertaken to determine which houses should be dealt with by demolition, repair or reconditioning.

It is anticipated that efforts will be made to recondition certain houses in accordance with the provisions of the Housing Act, 1949.

*Sub-letting.*—The result of periodical surveys indicates that there are 4,824 sub-let houses in the Borough, 3,915 housing two families and 909 housing three or more families. These houses, used for sub-letting, were built originally to house one family, and no alteration has been carried out to provide improved amenities for the families now in occupation. The families share one, two or three rooms; they use common sanitary accommodation, refuse disposal and water supply, and in some cases are compelled to carry water from the basement. Refuse has to be collected in living rooms in small containers and emptied periodically into a communal bin.

It is impossible to apply the bye-laws to this class of house, for the cost of renovating and reconditioning would be excessive.

Particular attention has been paid to disinfection and the immediate repair of sanitary defects, together with isolation and removal of all infectious cases from these overcrowded dwellings.

Consideration is being given to the possibility of wholesale reconditioning of some of these houses under the provisions of the Housing Act, 1949, but there are a number of practical difficulties to be overcome.

*Overcrowding.*—The acute housing shortage has prevented application of the overcrowding provisions of the Housing Acts, and action has consisted mainly in the prevention of the use of basements for sleeping purposes, and the reduction of gross overcrowding.

During the year 100 reports were made for consideration by the Medical Officer of Health, in connection with applications for priority in re-housing. Besides being overcrowded, many cases had a record of chronic infection or other serious illness, and in some cases families were found to be living and sleeping in an attic or in a basement. It is to these houses that constant visitation is required.

*Municipal Houses.*—On a change of tenancy, all municipal houses are inspected, and 251 houses have been so visited. Of these 196 were vacant at the time of the visit and 111 habitation certificates were issued after treatment or repair of the premises.

The household effects of 37 new tenants were found to be verminous, and were treated with hydrogen cyanide gas prior to being taken into the municipal houses.

#### **Training of Students.**

Six students received theoretical and practical training during the year, and five subsequently passed the qualifying examination.

TABLE OF CAUSES OF DEATH AT DIFFERENT PERIODS OF LIFE DURING THE YEAR 1949.

## AGE GROUPS.

CAUSES OF DEATH.	All Ages		Under 1 year		1-5 years		5-15 years		15-45 years		45-65 years		65 & upwards	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1. Typhoid and parat. fevers	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Cerebrospinal fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Scarlet fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Whooping Cough	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Diphtheria	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6. Tuberculosis of resp. system	..	..	..	..	..	..	31	35	..	..	13	26	16	5
7. Other forms of tuberculosis	..	..	..	..	..	..	2	5	..	..	1	1	1	3
8. Syphilitic diseases	..	..	..	..	..	..	4	..	..	..	1	..	1	..
9. Influenza	..	..	..	..	..	..	3	4	..	..	1	..	2	4
10. Measles	..	..	..	..	..	..	1	1	..	..	1	..	1	..
11. Ac. polio-myel. and polio-enceph.	..	..	..	..	..	..	1	..	..	..	1	..	1	..
12. Ac. inf. enceph.	..	..	..	..	..	..	1	..	..	..	1	..	1	..
13. Cancer of buc. cav. & oesoph. (M) uterus (F)	..	..	..	..	..	..	7	5	..	..	1	3	2	2
14. Cancer of stomach and duodenum	..	..	..	..	..	..	9	10	..	..	1	1	1	1
15. Cancer of breast	..	..	..	..	..	..	6	..	..	..	1	1	1	1
16. Cancer of all other sites	..	..	..	..	..	..	50	25	..	..	6	6	6	..
17. Diabetes	..	..	..	..	..	..	1	1	..	..	1	..	1	..
18. Intracranial vascular lesions	..	..	..	..	..	..	31	24	..	..	1	1	5	3
19. Heart diseases	..	..	..	..	..	..	97	101	..	..	3	8	31	23
20. Other diseases of circulatory system	..	..	..	..	..	..	11	19	..	..	1	1	10	9
21. Bronchitis	..	..	..	..	..	..	32	22	2	1	1	2	15	5
22. Pneumonia	..	..	..	..	..	..	25	30	9	11	3	3	15	8
23. Other respiratory diseases	..	..	..	..	..	..	6	..	1	..	1	2	3	1
24. Ulcer of stomach or duodenum	..	..	..	..	..	..	8	2	..	..	1	1	4	1
25. Diarrhoea under two years	..	..	..	..	..	..	14	4	13	3	1	1	1	3
26. Appendicitis	..	..	..	..	..	..	3	1	..	..	1	2	1	2
27. Other digestive diseases	..	..	..	..	..	..	5	5	..	..	1	1	3	2
28. Nephritis	..	..	..	..	..	..	5	6	..	..	1	1	4	5
29. Puer. and post-abort. sepsis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
30. Other maternal causes	..	..	..	..	..	..	..	..	1	..	..	..	..	..
31. Premature birth	..	..	..	..	..	..	10	6	10	6	..	..	..	..
32. Con. mal. birth injuries, infant diseases	..	..	..	..	..	..	11	9	10	..	..	..	1	..
33. Suicide	..	..	..	..	..	..	5	4	..	..	3	3	3	1
34. Road traffic accidents	..	..	..	..	..	..	6	2	..	..	1	2	1	1
35. Other violent causes	..	..	..	..	..	..	11	7	3	2	1	2	2	5
36. All other causes	..	..	..	..	..	..	19	32	..	..	3	5	5	21
A.I.I. CAUSES	410	373	47	37	13	10	9	2	42	59	120	71	170	104

## INFANT MORTALITY, 1949—CAUSES OF DEATH.

CAUSES OF DEATH.		Total Deaths under One Year.
Small-pox	1	1
Chicken-pox	...	1
Measles	...	2
Scarlet Fever	...	1
Whooping Cough	...	2
Diphtheria and Croup	...	1
Erysipelas	...	2
Tuberculous Meningitis	...	1
Abdominal Tuberculosis	...	1
Other Tuberculous Diseases	...	1
Meningitis ( <i>not Tuberculous</i> )	...	23
Convulsions	...	6
Laryngitis	...	4
Bronchitis	...	2
Pneumonia (all forms)	...	1
Enteritis	...	1
Gastritis	...	1
Syphilis	...	1
Rickets	...	1
Suffocation, asphyxia	...	2
Congenital Heart Disease	...	1
Atelectasis	...	1
Congenital Malformations, Birth Injury	10	1
Premature Birth	13	2
Atrophy, Debility and Marasmus	...	1
Other Causes	...	1
<b>Totals</b>	<b>24</b>	<b>84</b>

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